" We would suggest that : (1) New buildings be allowed to go to a height of 85 (instead of the present 80) ft. on the building line, plus an extra height of 40 (instead of 20) ft. set back within an angle of 75 deg. (2) New buildings be set back at pavement level in order to provide a minimum of 30 ft. to the centre of the street. The area given up to the public, multiplied by a height of 125 ft. plus one half of this volume, may be added to the building above the 125 ft. level, provided the added height is set back within the 75 deg. angle." The British Steelwork Association's Memorandum to the London Building Act Advisory Committee of the L.C.C.

" Zoning to be effective must be based on a general plan. Whatever the differences between conditions in London and New York, it is true of both that the chief economic consideration in determining the height and bulk of buildings is that the services of locomotion must be provided with efficiency at reasonable cost. Buildings used for different purposes imply different burdens on street traffic, and limitation of cubical contents in relation to use and open space about them is even more important than limitation of their height." Professor Thomas Adams, in a letter to THE TIMES, *discussing the B.S.A.'s memorandum.*

REPLANNING LONDON—PROGRESS REPORTED

THE very able and genuinely constructive Memorandum drawn up by the British Steelwork Association is a great step forward. If it is not exactly (as *The Times* calls it) " A New Plan for London " in itself, it should serve as an invaluable blue-print on which that essential plan may in part be based. As such it deserves the warmest welcome for setting a ball rolling which even the monumental inertia of Bumbledom cannot hope to stimy. Action of some sort must come of it. The Building Industry can be trusted to see that it is not stifled in a county hall pigeon-hole.

The authors claim that their recommendations would stimulate rebuilding in the central areas ; reduce the cost of street widenings, and therefore expedite them ; encourage broader architectural treatments for better, because bigger, sites and buildings ; and thereby suppress many narrow side-streets that have no justification in reason, and the badly-lit, uneconomic types of structure they perpetuate. These claims are largely justified, but closer examination of the two concrete proposals they are founded on reveals certain dangers—dangers which it should be relatively easy to neutralize.

Apparently once the desired amendments to the London Building Act have been secured future building development is to be left entirely to private enterprise—that is to business firms only ready to co-operate with one another if it suits their private interests, which are by no means necessarily those of the public. The inducement to the former to " rebuild on more modern and economic lines " is " the added height and cube to the buildings " ; and to the latter short stretches of roadway having a minimum width of 60 ft. in front of them. This, in so far as it is planning at all, seems perilously akin to American trust-planning for the greater profit of the smallest number. Another danger is that by helping to give a fresh lease of life to the bad old unsystem of piecemeal widenings (" as and when opportunity occurs "), it will encourage the L.C.C. to continue shelving the adoption of a definite plan for the uniform rectification of the existing main roads, and the construction of a co-ordinated ancillary network of entirely new relieving thoroughfares. Yet the Memorandum admits that the £4,500,000 spent by the L.C.C. in acquiring the land for the only new roads worthy of the name it has ever built—Kingsway and Aldwych, which really have helped to alleviate traffic congestion in the central areas—was recouped for the community within seventeen years : surely a sufficient commentary in itself. With isolated blocks of these higher buildings springing up all over the City and West End, accompanied by patches of 60 ft. street widenings limited to their immediate frontages, there would be more bottlenecks, and consequent chronic " corkings-up " of traffic than ever, unless the municipal authorities were empowered to schedule their construction in simultaneous " lifts " of one road at a time. It cannot be too often repeated that every street widening in London, however minor, or purely local, its importance may seem, ought to be carried out in one way, and one way only : *as part and parcel of a comprehensive street-plan for the whole of that vast territory vaguely called Greater London.* As the architectural correspondent of *The Times* reminded us on Monday, " the architectural responsibility for the proposed Charing Cross Bridge begins somewhere about Brighton."

In reversing the order of the Memorandum's two principal recommendations, Professor Adams insists that the correlation of higher building to street widening must be preceded by the preparation of " height- and use-zoning plans " for the different metropolitan districts. " Public space " (streets, parks, etc.) according to him, should constitute at least 50 per cent. of the superficial area of any given district : a state of affairs already existing in Central New York, but virtually nowhere in Central London. City and West End streets widened uniformly to 60 ft. would do comparatively little towards removing this disparity. On the other hand, restricting the number of cubic feet in the buildings forming them in ratio to the number of square feet of their ground area would do a lot ; and the abolition of interior light wells by carving three-sided recesses out of the façades is one of the most sensible improvements suggested. A single uniform building level for the whole of London is clearly as illogical as it is undesirable ; but this admission must not be taken to imply that reduction in the numbers of separate buildings ought necessarily to presuppose " the fewer the higher." Half a dozen 180 ft. Underground buildings is one thing, hundreds of 180 ft. Shell buildings quite another. The Georgian and Regency builders who built not in blocks, but in whole streets and quarters, had a far surer eye for urban dignity and a far surer grasp of urban planning, than the architects of the latest Antwerp, Rotterdam and Vienna " baby-skyscrapers."

It is true we are moving towards bigger blocks for both business and residential purposes, but no individual block should be allowed so big that (as in New York) it requires the full capacity of a tube station to fill and empty it at peak-hours.

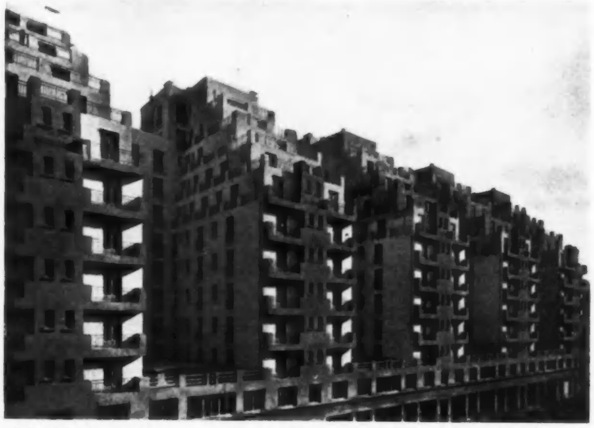
Two other very important points are rightly stressed. The first is that the effect of existing restrictions limiting the effective height of buildings to 100 ft. is the pernicious one of forcing under the pavements the three or four extra stories denied them above their parapets. The other is that many of the streets most in need of widening are already so fully built up that "no recoupment through enhanced site-values is to be anticipated" from rebuilding them unless tower-like superstructures are allowed to "diversify" their sky-lines. This seems one of the few cases in which advocates of replanning by the compulsory pooling and proportional redistribution of sites might agree that some supplementary compensation was equitable.

In discussing the Memorandum *The Times* hints desparingly that it is impossible and useless to wait for a Plan for London. Its wholesale rebuilding, we all know, is inevitable in any case, but if London is to follow a plan, the first thing to be established is not which of the worst existing bottle-necks is to be widened, but the trace of the new thoroughfares and circuses which may sweep away many necks and bottles alike. These are issues that cannot be shirked indefinitely. Are we to wait for the kind of social revolution that might not prove to be a purely figurative one to bring both into being?

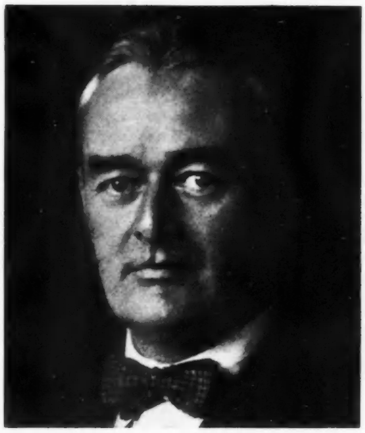
NOTES & TOPICS

THE HALIFAX

THERE has been a good deal written about Building Societies recently in this and other journals. Some of the architectural contributions show a not altogether unnatural inclination to make them out brutish organisms insensible to the higher things of life.



Big-block zoning on the Continent. Eleven-story blocks of municipal workmen's tenement flats at Villeurbanne, near Lyons, France. The buildings are steel-frame construction with brick infillings. The top four floors have progressive set backs, and the staircases continuous glass casements. Lifts are provided. The ground floors are let as shops. Architect: Maurice Leroux.



John C. Proctor, F.R.I.B.A., the author of the design placed first in the competition for a hall of residence for Sheffield University. See pages 8 and 9.

Remember this. I think it ought to be put on record that one of the Building Societies—The Halifax, whose Chairman is Sir Enoch Hill—has just bought for distribution five thousand copies of *The Adventure of Building.*

*

The Adventure of Building needs no introduction to readers of this JOURNAL* There is a hymn describing how even maidservants can lighten some dark corner. *The Adventure of Building* (cause, the architect-built-house) is at this moment lightening over fifty thousand corners. And now five thousand more are to be illuminated by the Halifax.

*

ADVICE TO R.A.'S.

I have just seen the British Industrial Art number of *The Architectural Review*. Advice to such members of the Royal Academy and Royal Society of Arts as are dreaming of the Art in Industry Exhibition of 1935: read Lord Gorell's introduction and get it by heart.

*

THIS EXPRESSIONISM

Alas! I am growing old; Already I am beginning to notice how young all the policemen look. And not only that; I find myself still believing that a shopfront and its window-dressing should express the character of the goods sold inside.

*

I was standing in a tobacconist's shop, not seven parasangs from Brompton Road. A curious, comical little shop, rather (might I say?) *feminine.*

*

Then I remembered that in these days when women smoke (and have rightly, therefore, to be encouraged to go in and buy their own cigarettes) the *décor* of the tobacconist's shop must be expected to make a change—to sacrifice some of its traditional atmosphere of makeshift squalor and reflect that delicacy which historians tell us was an attribute peculiar to the other sex.

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* The new edition is reviewed on page 22.—Ed. *A.J.*

I was reflecting on this matter and wondering whether this delicate decoration which surrounded me had not gone a bit *too* lovely for a tobacco shop, when a lovely apparition swept in through the door.

*

" Manicure, please," she said.

*

THE " ORIGINAL " MARK OF THE BEAST

A kind correspondent has sent me a page from a catalogue which urges me to " Depart from Convention—Originate ! " It illustrates a number of animals, frogs, stoats and whatnot, crouching on neat little rocks.

*

These objects are called Ornarocks, and (I quote the catalogue) " Ornarocks enable you to introduce an air of novelty where the unusual is difficult to attain." Then there are some helpful hints about the disposal of these *objets d'art.* "Put the frogs at the edge of or in your lily pond. . . . Place the snake at the foot of the steps and the rats and stoat in your courtyard, and win that prized ' How original ! ' "

*

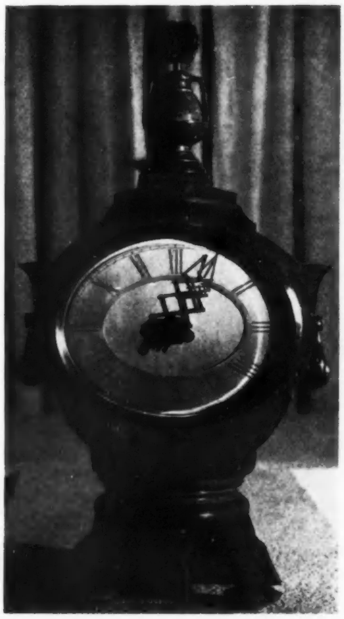
Architects who are panting for this sort of comment from the world might well consider the possibility of tossing a few of these gay little embellishments into their elevations.

*

AT THE B.I.A.

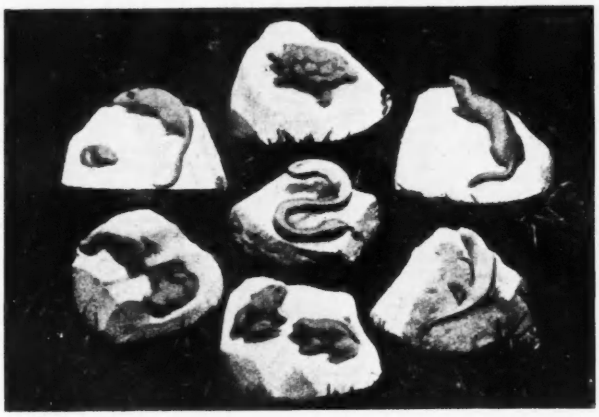
After one or two of the *ensembles* in the Dorland Hall Exhibition of British *Industrial* Art, by far the best joke is this clock, by Sir Edwin Lutyens, which is of bronze.

*



Bronze clock by Sir Edwin Lutyens, R.A. exhibited at the B.I.A. Exhibition. The finial, it should be noted, is also the key, and the hands are telescopic in shape.

Depart from Convention—Originate!



A selection of Ornarocks, ornamental cast-stone rocks; See Astragal's note on this page. They are 9 ins. high and will last a lifetime.

" EDUCATE OR OPERATE "

I have received the following communication from a correspondent who signs himself *Lay Reader and Distressed Taxpayer*—I wish I knew what he meant.

OPENING THE JOURNAL AT PAGE 804 TWO SENTENCES STAND OUT IN BOLD RELIEF. " TEN IN A BEDROOM AT LIVERPOOL " AND " THE CONSCIENCE OF THE NATION HAS BEEN ROUSED." WHY TEN ? IS THE TIME NOT RIPE FOR THE CONSCIENCE OF THE SLUM DWELLER TO BE ROUSED ? ARE THE NEW HOUSING SCHEMES TO BECOME RABBIT WARRENS WITHIN A FEW YEARS? YOUR SLOGAN FOR LONDON IS "REORGANIZE OR DISINTEGRATE." LET THE SLOGAN FOR THE SLUMS BE " EDUCATE OR OPERATE."

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, July 6

EXHIBITION OF INDUSTRIAL ART IN RELATION TO THE HOME. At Dorland Hall, Lower Regent Street, S.W. Until July 12. 9.30 a.m. to 7.30 p.m. (Wednesdays 9.30 a.m. to 10 p.m.) 9.30 *a.m.*

ARCHITECTURAL ASSOCIATION, 34, *Bedford Square, W.C.*1. Exhibition of recent work of the Egypt Exploration Society. Until July 15. 10 a.m. to 10 p.m. 10 *a.m.*

*ROYAL ACADEMY, Burlington House, Piccadilly, W.*1. Summer Exhibition. Until August 7. 9 a.m. to 7 p.m. 9 *a.m.*

BUILDING CENTRE, 158, *New Bond Street, W.*1. Housing Exhibition. 11 a.m. to 7 p.m. (Sats. 1 p.m.) 11 *a.m.*

Saturday, July 8

Sunrise 4.52 a.m. Sunset 9.17 p.m.

Monday, July 10

ARCHITECTURAL ASSOCIATION, 34 *Bedford Square, W.C.* Lecture in connection with the exhibition of recent work of the Egypt Exploration Society. By J. D. S. Pendlebury, M.A. 8 *p.m.*

SOCIETY OF CHEMICAL INDUSTRY. At Newcastle-on-Tyne. Annual General Meeting. Until July 14.

THE INSTITUTE OF QUARRYING. At Birmingham. Fifteenth Annual Meeting. Until July 13.

NEWS

●

POINTS FROM THIS ISSUE

Planning new thoroughfares are issues that cannot be shelved indefinitely 3

Let the slogan for the slums be " Educate or Operate " 5

It does not follow that because a Member of the R.I.B.A. Council happens to be a provincial man that he represents the provincial element 12

The point that a builder cannot obtain competitive estimates of cost should be more widely exploited by the profession 22

It is impossible on noisy sites to defend buildings against traffic noises unless the principle of closed windows is accepted 23

Is it beneath the dignity of the architect to soil his fingers with a trade closely connected with speculative building? .. 24

●

ULSTER SOCIETY OF ARCHITECTS

At the annual meeting of the Royal Society of Ulster Architects held at Belfast, Mr. Thomas Houston, L.R.I.B.A., was elected President in succession to Mr. R. H. Gibson, F.R.I.B.A., and Mr. R. S. Wilshere, A.R.I.B.A., P.A.S.I., Education Architect of Belfast, was elected Vice-President.

The other appointments were: Hon. Treasurer, Mr. John M'Geagh, A.R.I.B.A.; hon. secretary, Mr. T. R. Eagar, L.R.I.B.A., M.R.I.A.I.; Council: Messrs. R. H. Gibson, Kendrick Edwards, F.R.I.B.A., John Seeds, F.R.I.B.A., J. H. Stevenson, J. S. Munce, B.E. (Holywood); Associates: Messrs. C. T. M'Lynn and H. M'Caughan; hon. auditors, Messrs. A. F. Lucy, M.R.I.A.I., and J. Scott, B.E.; delegate to the R.I.B.A. Council and Allied Societies Conference: Mr. R. S. Wilshere.

Sub-committees: Executive — Messrs. R. H. Gibson and J. H. Stevenson; Education—Messrs. John Seeds, R. H. Gibson, C. T. M'Lynn, H. M'Caughan and A. F. Lucy; Town Planning—Messrs. J. H. Stevenson, Kendrick Edwards, J. P. M'Grath, J. Hanna, J. S. Munce, J. Donnelly, J. A. Davidson and W. D. R. Taggart; Art and Literature—Messrs. R. S. Wilshere, J. N. Hall, John Seeds, C. T. M'Lynn and H. M'Caughan; House and Social—Messrs. A. F. Lucy and T. R. Eagar; By-Laws — Messrs. Kendrick Edwards and R. H. Gibson; Conditions of Contract—Messrs. Kendrick Edwards, R. H. Gibson, J. H. Stevenson, J. Seeds and J. S. Munce; Licentiate—Messrs. R. H. Gibson, J. Seeds, J. P. M'Grath and J. A. Davidson.

The membership now totals 159.

The Special Committee for Public Relations of the Building Industries National Council continues to press local authorities to proceed with their housing and slum clearance proposals as a matter of urgent social and economic importance. A progressive housing policy will do much to stimulate economic rehabilitation. But equally the Committee is pressing for a resumption of the larger works. Until large scale public works of the kind that were undertaken before the " economy " campaign are again put in hand, neither the economic position of the nation nor that of the Building and Allied Industries can be regarded as healthy.

This work invites the full support of the whole Industry. Subscriptions should be made payable to the " Special Committee for Public Relations," and be addressed to Mr. Oswald Healing, F.S.I., at 5 Duke Street, Adelphi, London, W.C.2.

…GHTH DAY OF JUNE IN THE YEAR
…SAND NINEHUNDRED & THIRTY THREE
…FIRST STONE OF THE HOUSE OF THE
…YAL INSTITUTE OF BRITISH ARCHITECTS
…T IN THE CENTENARY YEAR WAS LAID BY
…N EIGHTH BARON HOWARD DE WALDEN
A PATRON OF THE ARTS AND THE OWNER
…UPON WHICH THIS BUILDING STANDS

The Rt. Hon. Lord Howard de Walden and Seaford laying the foundation stone of the new R.I.B.A. building. The ceremony took place on Wednesday of last week. The architects shown in the photograph (reading from left to right) are: Sir Raymond Unwin, P.R.I.B.A.; Sir Giles Gilbert Scott, R.A.; and Messrs. Maurice E. Webb and H. S. Goodhart-Rendel.

TRADITIONS IN ARCHITECTURE

Sir Raymond Unwin, P.R.I.B.A. was the guest of the Manchester Luncheon Club on Monday, at the Midland Hotel, Manchester, when he spoke on " Architecture—an art and a science."

He said we were today in a period when some of our traditions in architecture were questioned, and rightly questioned. Things were changing so rapidly, with new methods of construction and new fittings required in houses. He instanced all-electric cottages in London, and went on to say that an architect's main function in designing a cottage or a house was to see that he made what otherwise would be a mere building into a house that people could come to love as their home. Part of that function was to make it beautiful. We had always liked beauty in the past, and it was only because we had been so tremendously pressed in the last century in turning out everything by mass production that our attention had been distracted. He was sure we should return to that liking for beauty.

EXHIBITIONS

H.M. the Queen paid a surprise visit to the Exhibition of Industrial Art in Relation to the Home, at Dorland Hall last week. During the past Her Majesty has displayed great interest in anything connected with the home, and among the specimen rooms at the Exhibition which most appeal to her were the bedroom by Messrs. Trollope and Mr. Raymond McGrath, and Mr. Wells Coates's " Minimum Flat." Her Majesty also showed particular interest in Mr. Chermayeff's " modern bungalow." At the conclusion of her tour, the Queen expressed the hope that the exhibition would be well patronized.

In addition to the B.I.A., several other exhibitions connected with architecture and other arts are now being held in England and abroad. The World's Fair, Chicago, which opened last month, is the subject of a special article by Mr. Frank Lloyd Wright, which will appear in our next issue.

An exhibition representing the work during the past five years of students of the University of Durham School of Architecture, Armstrong College, and including several designs for Newcastle's projected new town hall, was opened on Tuesday last by Sir Herbert Baker, at the Laing Art Gallery, Newcastle.

The exhibition will remain open until July 11.

THE BRITISH POSTGRADUATE MEDICAL SCHOOL

On July 17, the Chancellor of the Exchequer will lay the foundation-stone of the British Postgraduate Medical School buildings at the L.C.C. Hospital, Ducane Road, Hammersmith.

THE NEW FREEMASONS' HOSPITAL

The New Freemasons' Hospital at Ravenscourt Park is to be opened by H.M. the King on July 12. The architects are Sir John Burnet, Tait, and Lorne.

DESIGN FOR THE PALACE OF SOVIETS

It has been reported in the Soviet press that the Construction Council has chosen the design of a Soviet architect—Mr. V. M. Iofan—as a basis for the building of the Palace of Soviets in Moscow. It will be recalled that Mr. Iofan together with Academician Jeltovsky and Mr. Hamilton, the American architect, were awarded the first prize in the competition for the design for the Palace.

Though the design of Mr. Iofan has been selected, parts of the design of other architects will be used in the working out of the final plan.

The building is to be constructed of concrete and reinforced concrete with granite and marble facings. Sculpture is to be extensively used in decoration. The top of the Palace will be crowned with a statue of Lenin, some 50 to 75 metres high.

R. I. B. A.

THE CODE OF PROFESSIONAL PRACTICE

The Council of the R.I.B.A., on the recommendation of the Practice Standing Committee, have added the following clause to the Code of Professional Practice :

New Clause 3 (c). An architect may consent to the publication of a series of illustrations either in circular, brochure or book form, with or without descriptive letterpress, of any building or buildings for which he has been responsible, provided that (a) if advertisements appear, Clause 3(d) (2) of the Code is complied with, and (b) there is no attempt to distribute the publication to potential clients.

The existing clauses 3(c) and 3(d) will be re-numbered 3(d) and 3(e) respectively.

ARCHITECTURE
AS A
TRADE

Arriere-vousure bombée et reglée auec vne lunette pratiquee dans vn berceau

[*By ICONOCLAST*]

4. Registration

[*In this, the fourth article of the series, Iconoclast deals with a question which has recently been under constant discussion—that of Registration.*

His frank recognition of the objects of Registration and his equally frank condemnation of the inadequacy of the Registration Act should serve, as Iconoclast says of the Act itself, as an object lesson to the profession to take greater interest in the direction of its affairs. While we do not necessarily agree with his every word we feel that the expression of the most candid opinions on so important a question can do nothing but good.

—ED., *A.J.*]

HAVING decided to look upon architecture as a trade, it is natural to go one step further and envisage a trade union designed to restrict the tradesmen to those who have been efficiently trained and have passed through an adequate test. To look upon the question of registration in any other light than as a trade union measure may be more palatable to those of delicate taste, but quite unreal. To look upon a thing as trade selfishness because it emanates from a trade union may be orthodox toryism, but is equally unreal.

Having accepted these two principles, the ground is cleared for a sensible review of the registration question, both from the point of view of the things which registration ought to give and the things which the Registration Act does actually give.

The ideal, so far as the tradesman is concerned, is that his trade should be closed to all but genuine tradesmen. An Act which laid down the rule that no building should be executed without the supervision of an architect would be a comprehensive measure ensuring a living for all existing architects and probably a good many more besides, and its weakness would probably be its apparent strength, since the completely protected trade generally perishes by inertia.

The next step, short of this, would be to deny any but the genuine tradesman the right to call himself an architect. It would be a measure of common justice to grant so much to the trade of architecture, and it is only the vested interests of the vast number of people who call themselves architects but have no training and skill to justify the honour, and not the faintest hope of qualifying for such an honour by any reasonable test, that prevents it being achieved. We have to accept the plain fact that those vested interests exist and that they are too powerful to over-ride, and to seek some less ambitious privilege.

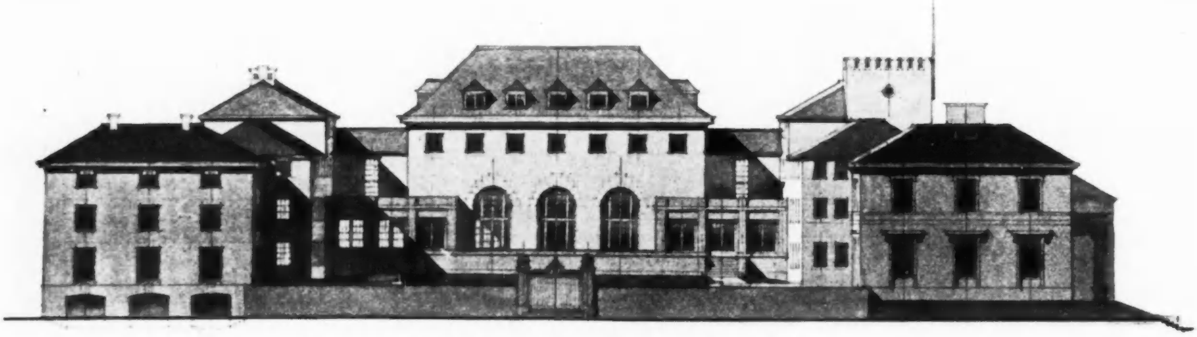
So we arrive at the first principle of the Registration Act, which is professedly to compile a register of architects to whom will be granted the privilege of calling themselves " Registered Architects," to the exclusion of those failing to enrol, who may content themselves with the plain title of " architect." This seems a modest and reasonable claim, not in the least likely to receive the opposition that materialized from all sides and from many different angles.

That which appeared from a dislike of any attempt to differentiate publicly between the tradesman and the quack is obvious, and probably the surest sign to the public that some such form of different ation was necessary for its own protection.

That which emanated from some of the best qualified architects of the day was superficially less easy to understand. Yet this type of man had a real case to put, with little chance of stating it where it was likely to be heard. His case was that, whereas he welcomed an attempt to divide by law the genuine architect from the false, the whole success of the scheme must inevitably depend upon the care and discrimination used in separating the sheep from the goats.

He found no satisfaction in seeing half a dozen goats outside the fold when the gates were thrown open to many strange animals with horns and

COMPETITION FOR HALL OF RESIDENCE,



ELEVATION TO THE SOUTH

beards which he found it difficult to distinguish from the rejects. He saw first of all the Institute, membership of which he himself gained by arduous and expensive training and qualification, opened to admit a number of practitioners who had previously been unwilling, or unable, to pass by the same means. He saw this process initiated many years ago as a temporary measure, and repeated within the last few years, again professedly as a temporary measure. He then saw new mushroom societies springing up and obtaining apparently as much consideration as his own long-established Institute.

Then he saw that the remnants of the profession who were unable to qualify in any organized society or unwilling to be placed under any sort of organized discipline, and were therefore described as "unattached," asking to be recognized as a unity and receiving recognition. Then he saw the estate agent and the auctioneer, who maintained generally an inefficien architectural department, the existence of which type was one of the believed reasons for establishing a register to stand for efficiency, demanding that they too should be eligible for the exclusive register, and gaining their point.

Finally, as a last bitter pill, he finds the amended and re-amended and again re-amended Bill passing into law with a clause that will permit any firm of builders, or house furnishers, satisfying certain loose conditions, to maintain an architectural department which also shall be eligible for the register.

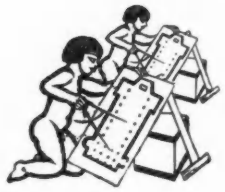
At this point he asks himself what the register is for. Apparently, it is to discriminate between the architect simple and the architect registered, and succeeds in its object by admitting any person who cares to adopt the title. At such a price the surrender of the opposition was dearly bought, and, thinking so, he may be forgiven for electing to secure the distinction of remaining the "architect simple."

That is the pretty kettle of fish into which the profession has landed itself and out of which it has to extract itself. It is no use saying that because the Institute has secured an overwhelming majority on the registering body the Act can be gradually amended to become a useful trade union measure, because it is obvious that the amendments necessary are not mere errors of drafting but are matters of important principle which can only be altered with the consent of the Parliament that passed the Act. It is equally clear that to bring these matters before Parliament again is to awake with all its fury the opposition which forced upon the promoters of the Bill the emasculating provisions that account for its present form.

As skilled tradesmen we may therefore put out of our minds any hope of improved conditions arising out of the Registration Act. It is an irreparable disaster standing directly in the way of any real protective legislation in this generation or in many to come, and its real usefulness is that it will remain as an object-lesson to the profession to take greater interest in its affairs and direct sternly the men it chooses to represent it as a profession.

In this series of discussions upon architecture as a trade, it is a bitter paradox that we should have to cast aside our only trade union measure as a means of improving conditions of practice.

COMPETITION



NEWS

SHEFFIELD COMPETITION RESULT

Mr. W. C. Fenton, F.R.I.B.A., of Sheffield, the assessor in the competition, promoted by the Council of Sheffield University, for a hall of residence for men students, has made his award as follows :—

First premium (£100) : Mr. John C. Proctor, F.R.I.B.A., Leeds.

Second premium (£75) : Messrs. Flockton and Son, F.R.I.B.A., of Sheffield.

Third premium (£50) : Messrs. Chapman and Jenkinson, AA.R.I.B.A., of Sheffield.

The hall of residence is to be erected on the site at present occupied by "Oakholme." in Clarkehouse Road, Sheffield, which building was to be incorporated in the scheme. The estimated cost of the new building is £38,000.

The author of the winning design has made good use of the existing buildings, incorporating the bulk of them. The new hall will form three sides of a quadrangle, the open side being to the south. The building will be in stone and will provide accommodation for 100 men.

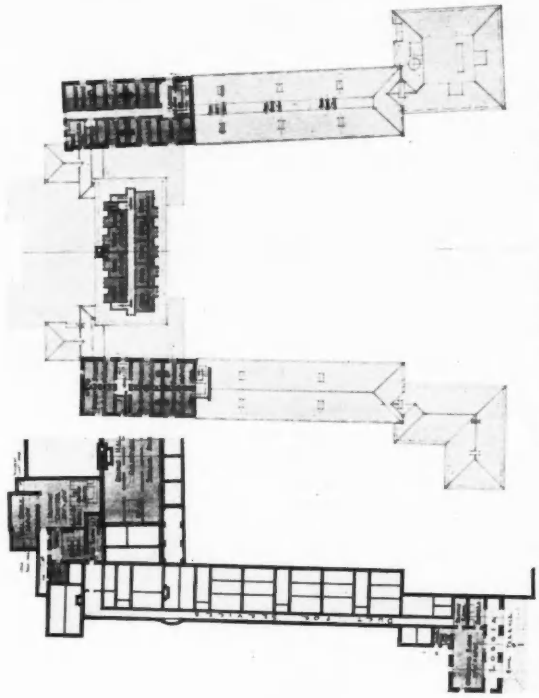
The rendering of the plans of the winning design, reproduced on the facing page makes the old and new work read together. The mansion is the square block at the south-east corner (north is at the top of the drawings) and the old stable buildings are situated to the north-east.

The chief points which differentiate the winning design from the others are :—

1. No attempt has been made to obtain a grandiose entrance. This made it possible to keep the large quadrangle open and quiet, unobstructed by carriage ways.

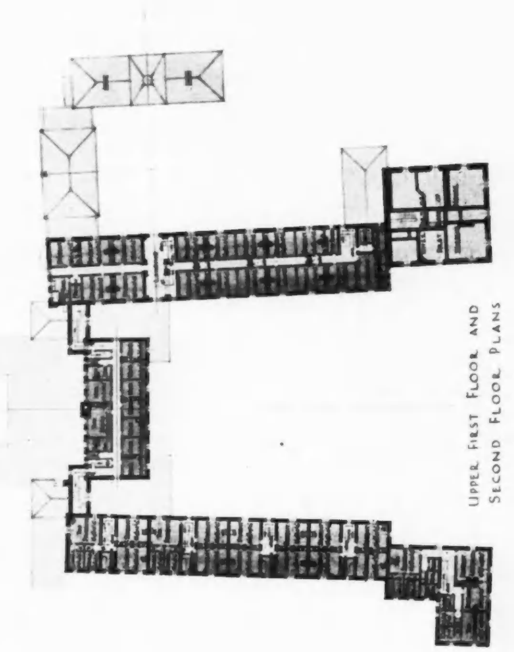
2. The combination of the "Staircase"

AT THE UNIVERSITY OF SHEFFIELD

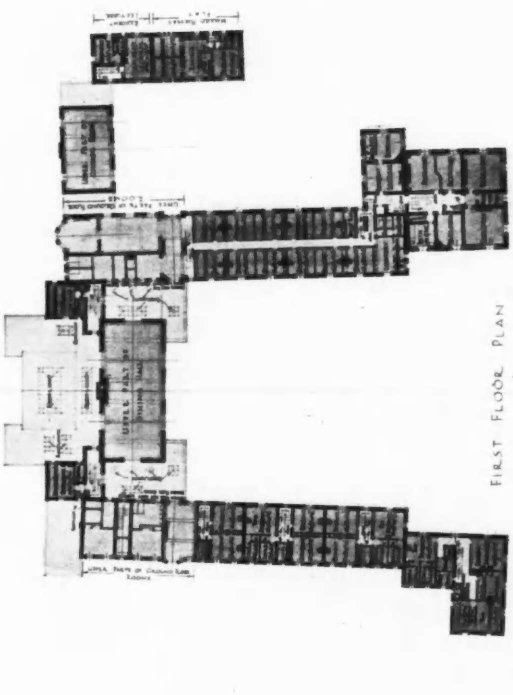


UPPER SECOND FLOOR AND ROOF PLAN.

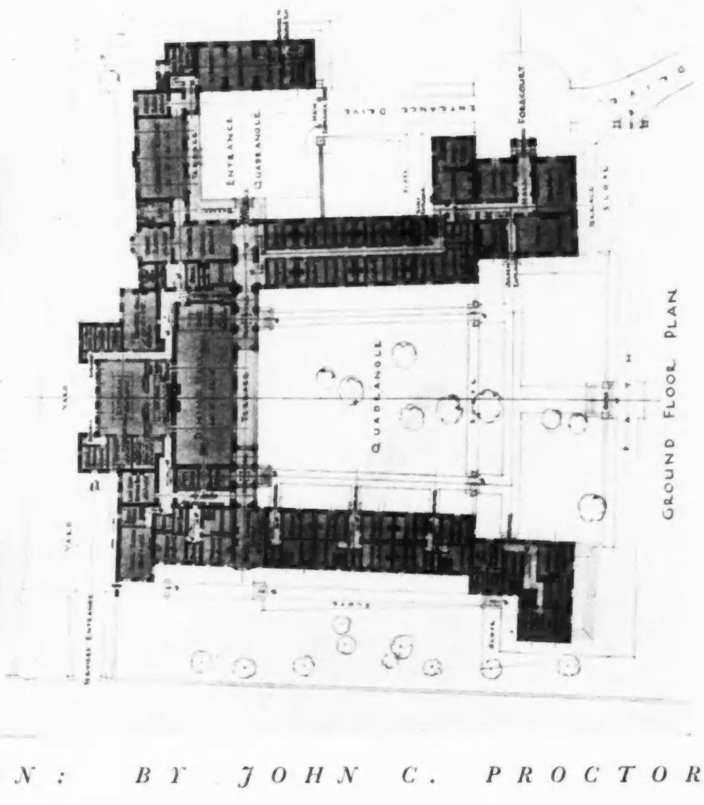
SUB-GROUND FLOOR PLAN.



UPPER FIRST FLOOR AND SECOND FLOOR PLANS


UPPER PART OF GROUND FLOOR ROOMS
UPPER PART OF DINING HALL

FIRST FLOOR PLAN


ENTRANCE QUADRANGLE
ENTRANCE DRIVE
FORECOURT
QUADRANGLE
YARD
SERVICE ENTRANCE

GROUND FLOOR PLAN

THE WINNING DESIGN: BY JOHN C. PROCTOR

and "Corridor" types of access to study bedrooms on the grounds that the latter is the more suitable for "freshers" at a provincial university who come at an earlier age and often from a very different sort of environment from Oxford and Cambridge men. By using the corridor type for the east wing the winner was able to give the warden (whom the conditions suggested should be housed in the existing mansion) covered access to the dining hall, etc., without the expense of cloisters. The students as they become 2nd and 3rd year men can be promoted to the west wing, where they get the greater freedom implied by the staircase method of access.

The winning design is illustrated on pages 8 and 9.

BEXHILL'S NEW COMPETITION

The R.I.B.A. have nominated Mr. T. S. Tait, F.R.I.B.A., as assessor for the competition for the development of the coastguard site, Bexhill, where the Corporation is, in the first place, to erect an entertainments' hall, at a cost of £50,000.

THE ANTWERP COMPETITION

The assessors in the competition for the lay-out of a suburb on the River Escant, Antwerp, have completed their examination of the ninety schemes submitted. They state that they are unable to award a first prize, as none of the designs submitted supplied a complete solution to the problem.

They have, however, awarded three second prizes of 50,000 francs each to the following firms:—Cols and De Roeck, of Antwerp; A. Gutton, of Paris; Viret, Marmorat and Monnoyer, of Paris and Brussels. Four third prizes of 25,000 francs each to Messrs. Fahrenkamp, Blume, Heinicke, Herbeck, Jenny, Pitzer, Schmidt, and Winkelman, of Dusseldorf; Girard and Romejon, of Paris; Reichow, Hogg, Götze, Heller and Schwarzbach, of Dresden; and Van Asperen, of Antwerp. Prizes of 10,000 francs each have been awarded to five other firms.

Competitions Open

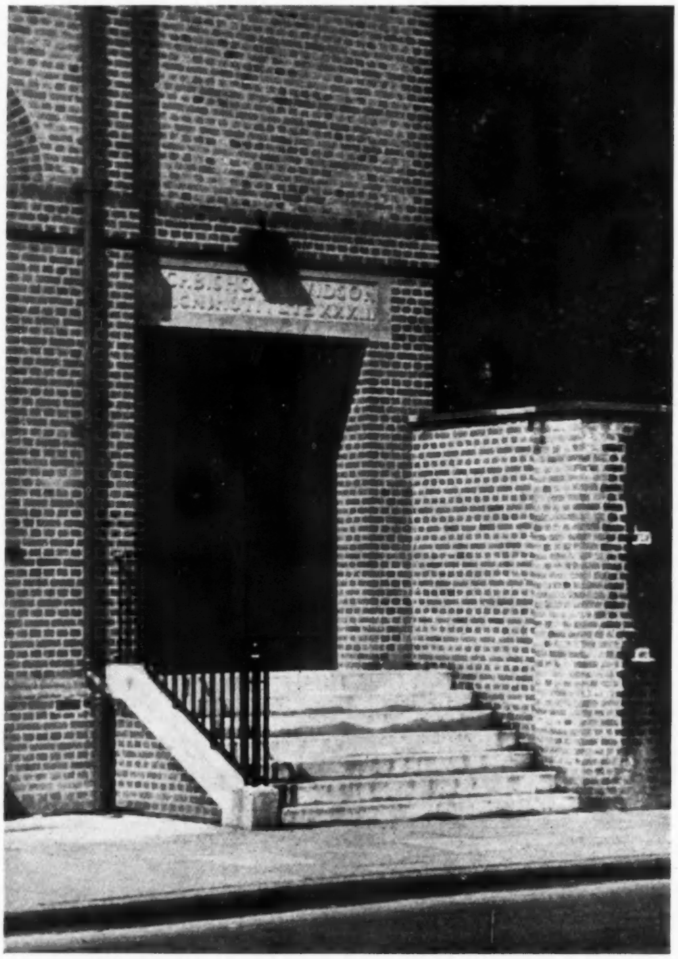
September 1.—Sending-in Day. Proposed Hospital at Surbiton. Assessor: C. E. Elcock, F.R.I.B.A. Premiums: £120, £75, £50 and £25. The conditions, obtainable from A. C. C. Dunn, Hon. Secretary, Surbiton Hospital, St. James's Road, Surbiton, were reviewed in *A.J.* for May 24.

September 11.—Sending-in Day. The Directors of Gidea Park, Ltd., invite designs for five different types of house (ranging from £400 to £900). Open to members or students of the R.I.B.A. Assessors: Prof. S. D. Adshead, F.R.I.B.A., A. E. Beresford, F.R.I.B.A., Ald. Ewart G. Culpin, F.R.I.B.A., E. Maxwell Fry, A.R.I.B.A., Howard Robertson, F.R.I.B.A., and W. Harding Thompson, F.R.I.B.A. In addition to being paid a fee according to the scale of charges of the R.I.B.A., the authors of the first five selected designs in each class will be paid a premium of £10. Particulars obtainable from Gidea Park, Ltd., The Estate Office, Hare Street, Gidea Park, Romford, Essex. Deposit 5s.

September 21.—Sending-in Day. Proposed Town Hall for the Borough of Hornsey. Assessor: C. Cowles-Voysey, F.R.I.B.A. Premiums: £350, £250 and £150. Full conditions, etc., were published in our issue for May 17.

[For competitions pending, see page 860 of last week's issue.]

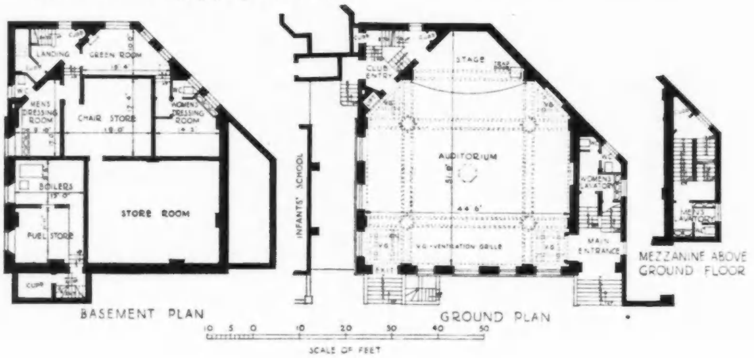
ARCHBISHOP DAVIDSON



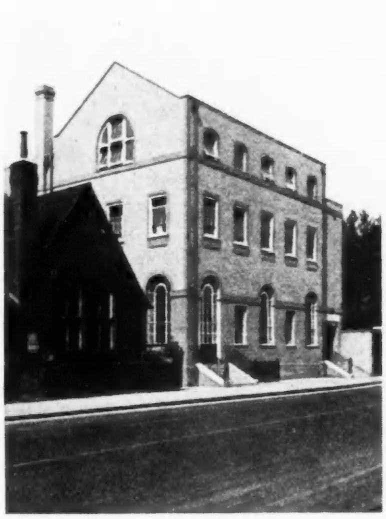
The ground floor and basement accommodate a social institute for the parish of Lambeth, and the first and second floors a boys' club. The building stands in Lambeth Road, on the site of the old brewhouse of Lambeth Palace.

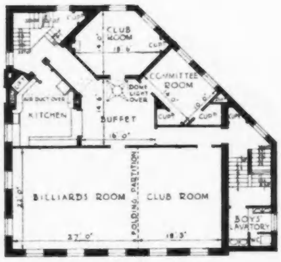
The exterior (see general view on facing page and main entrance above) is faced with London stock bricks, with Luton purples to quoins, window dressings, string courses, plinth and ground floor. The stonework is Doulton.

Inside the building, in view of hard usage, especially in the boys' club, the brickwork has been left bare except for colour-wash, and the woodwork stained and waxed. In the main hall (see section on facing page) the walls of the large splays and the stage are rendered with Keene's cement for acoustic reasons and the remainder of the walls and the ceiling are covered with wallboard, the beams and cove being of fibrous plaster and the dado lined with blue-grey jaspé linoleum.



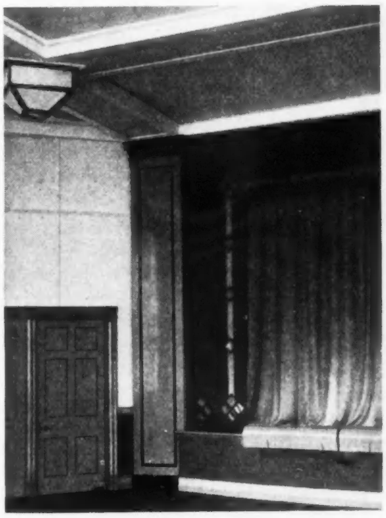
INSTITUTE, LAMBETH : BY H. M. FLETCHER

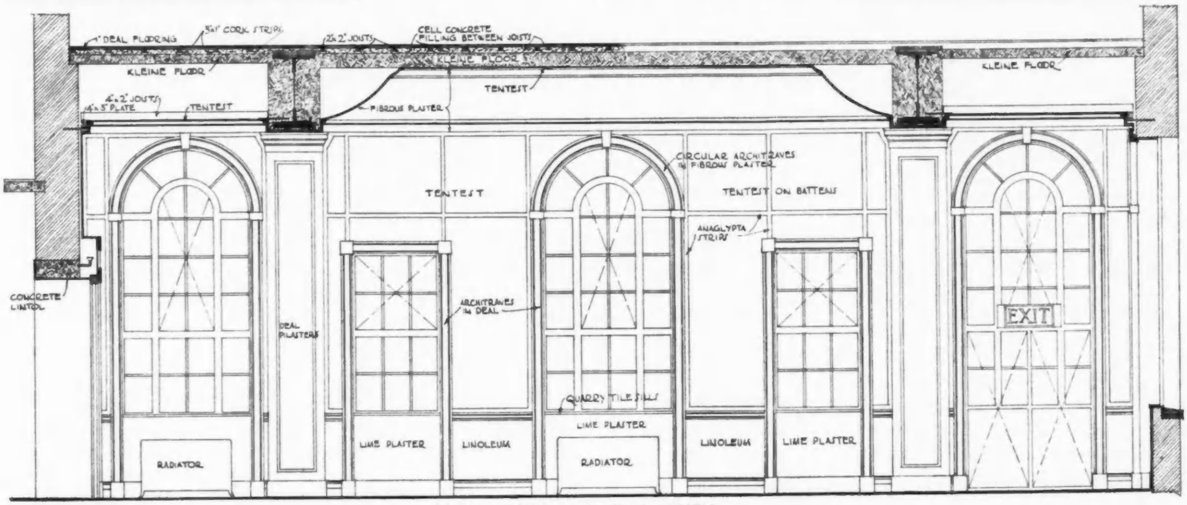



CLUB ROOM
18' 6"
CUPD
COMMITTEE ROOM
DOME LIGHT OVER
AIR DUCT OVER
KITCHEN
BUFFET
16' 0"
CUPD
CUPD
BILLIARDS ROOM
FOLDING PARTITION
CLUB ROOM
21' 0"
27' 0"
18' 3"
BOYS' LAVATORY
WC

FIRST FLOOR PLAN

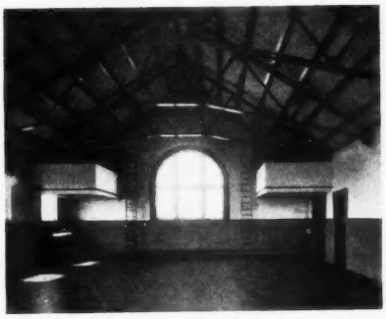
The colouring of the hall (see illustration on right) is mainly cream in the upper parts of the walls and the ceiling, and blue-grey for the dado and woodwork. The pilasters are scarlet with touches of black, and the frames of the light-fittings are scarlet. The proscenium is blue with a gold design; the curtains blue-grey, and the stage drapery curtains blue-black. When required the proscenium and curtains can be taken down rapidly and stored away.

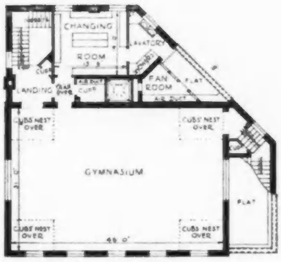



1" DEAL FLOORING
3"x1" CORK STRIPS
2"x2" JOISTS
CELL CONCRETE FILLING BETWEEN JOISTS
KLEINE FLOOR
KLEINE FLOOR
KLEINE FLOOR
TENTEST
4"x2" JOISTS
4"x3" PLATE
TENTEST
FIBROUS PLASTER
CIRCULAR ARCHITRAVES IN FIBROUS PLASTER
TENTEST
TENTEST ON BATTENS
ANAGLYPTA STRIPS
CONCRETE LINTOL
DEAL PILASTERS
ARCHITRAVES IN DEAL
EXIT
QUARRY TILE SILLS
LIME PLASTER
LIME PLASTER
LINOLEUM
LINOLEUM
LIME PLASTER
RADIATOR
RADIATOR

CROSS SECTION LOOKING SOUTH

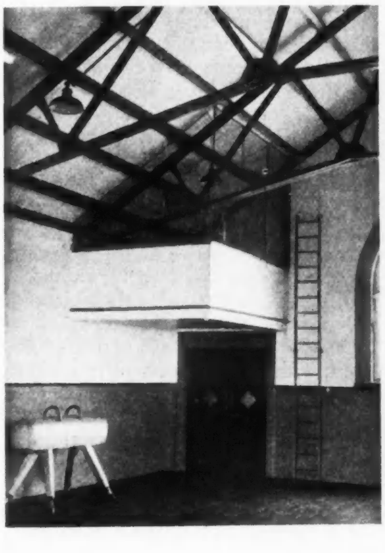
INCHES 12 6 0 5 10 15 20 25 FEET




CHANGING ROOM
LAVATORY
CUPD
LANDING
TANK OVER
AIR DUCT
CUPD
FAN ROOM
FLAT
AIR DUCT
CUBS' NEST OVER
CUBS' NEST OVER
GYMNASIUM
CUPD
FLAT
CUBS' NEST OVER
CUBS' NEST OVER
49' 0"

SECOND FLOOR PLAN

The gymnasium is white and grey. In each corner, above door level, is a cubs' nest, approached by a wall ladder. Each of the four patrols of cubs is thus provided with its own private quarters, while the gymnasium floor is left unencumbered. Sockets are let into the floor to enable a full-sized boxing ring to be erected. To prevent the noises of the boys' club from interrupting performances in the hall, the first and second floors are deadened. On top of the patent floors are laid 3 ins. by 1 in. cork strips at 18 ins. centres beneath 2 ins. by 2 ins. battens, with a filling of 2½ ins. cell concrete finished with 2½ in. cement screed. The 1 in. boarding is nailed to the battens and no air space remains.



LETTERS FROM READERS

ICONOCLAST

N. MARTIN-KAYE, F.R.I.B.A.

EDWARD P. WARREN, F.R.I.B.A.

R. COPPOCK,
General Secretary of the National Federation of Building Trades Operatives.

S. CHERMAYEFF

Architecture as a Trade

Sir,—The letter appearing in your last issue over the signature of Orthodox is an admirable defence of the *status quo* of the Institute. I am more concerned with the spirit than the letter and I hope to make it clear that I have not been so careless of fact as Orthodox suggests.

So far as experienced competence is concerned, I can only say that in my young days nine Associates out of ten were already capable assistants and therefore potentially more ready for practice than the school student. It was unusual for any Associate to qualify before having had at least four years' experience in an office, generally in full charge of jobs. The public could employ such men with some confidence.

Provincial representation is a matter of terms. It is true that the provincial man can be elected by the full electoral roll to a seat on the Council; but he gains the seat not as the representative of his district, but as one of the whole electorate. The only direct representatives of the provinces are those chosen to represent their respective allied societies, which I claim are in a small minority. The others could be excluded on a vote, although they might receive full marks from their own areas.

I am aware that the R.I.B.A. keeps in close touch with the Allied Societies upon all questions of policy, so far as its machinery will allow, and that the improvement in this direction in recent years has been marked and admirable. But it is inevitable that before schemes can become sufficiently formed to put to the Allied Societies for comment and approval, they have been sufficiently matured as to have become at least partially "cut and dried." The Allied Society Councillor has frequently to decide in one short meeting upon the merits of a scheme which has had long consideration at headquarters, and the objections to which he may subsequently become alive to, do not present themselves to him clearly enough to justify an adverse vote at the meeting.

Far from putting this down to any lack of desire at headquarters to be frank with the provinces, I am amazed at the close contact which is maintained. I consider that the way in which headquarters handles the cumbersome machinery is an amazing tribute to the devotion and activity of its officers.

I would like to simplify that machinery and assist the obvious desire of the R.I.B.A. to be truly representative; hence my headlong path into print.

ICONOCLAST

Sir,—I would like to support Iconoclast's statement concerning the representation of the provinces on the R.I.B.A. Council, and upon which he has been taken to task by Orthodox.

If Iconoclast is wrong and Orthodox is correct, perhaps the latter would be good enough to explain why there is such a poor return of voting papers at each annual election of the R.I.B.A. It is because provincial members are asked to vote for men they know nothing about. Orthodox may be assured that the provincial members on the Council of the R.I.B.A. are not there by the vote of every individual provincial member, since failing intimate and personal contact such as obtains between an M.P. and his constituents, and a proper voting system, a majority of provincial men do not trouble to vote at all, therefore Iconoclast is quite right in his contention and statement.

Further, it does not follow that because a Member of Council happens to be a provincial man that he is the appointed representative of men in the provinces, sent or elected with the distinct mission of representing the provincial element. This is not the scheme at all; if it were there would be an end to much prevalent apathy in professional affairs.

It is quite by chance that a Member of Council comes, say, from Northumberland, and yet Orthodox would have us believe he represents the profession, say, in Somersetshire, where conditions of practice possibly are totally different.

No, sir, it will not do. Space will not permit me to deal with the Associateship question, but it is quite obvious that neither is quite sure of his statements and certainly possesses no courage, otherwise he would not seek cover under anonymity.

N. MARTIN-KAYE

School of Pathology, Cambridge

Sir,—Mr. Harold Tomlinson's description of my School of Pathology at Cambridge (*not* "Laboratory," please), on page 791 of your issue for June 15, and his comparison of the building with my School of Pathology at Oxford are misleading. Stone dressings are much more characteristic of the Oxford "School" which preceded in date that of Cambridge, and in which stone was much more freely used.

At Cambridge, chiefly for reasons of economy, stone was used only for the entrance portico and the great staircase window above it and for keystones to the central groups of windows elsewhere.

The Oxford building is long, and relatively low, in order to avoid possible interference with astronomical observations from the adjacent observatory. It has three floors in all, and therefore three tiers of windows. The Cambridge building stands on a much more restricted site, and has four floors and four tiers of windows. It is, therefore, considerably loftier than its predecessor at Oxford, but has infinitely less dressed stone upon its façades.

EDWARD P. WARREN

Our Slum Issue

Sir,—I would like to congratulate you on the issue of your Journal for June 22.

Is it your intention to reproduce the articles of Mr. Massey in another form? The article is excellently done and better than anything I know of on slums. I am sure it will prove a great driving force, and you are to be congratulated on your courage.

R. COPPOCK

[*We hope that it will be possible to publish the Slum Survey, when completed, in pamphlet form. This will depend, of course, on the demand. As the Slum Issue is already going out of print, it is probable that such a course will be necessary.*—Ed., *A.J.*]

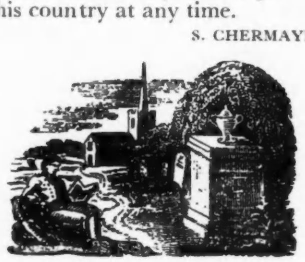
Plan Furniture

Sir,—I should like to clear up any misconception which may arise out of the statement in your issue for June 29, that "plan" furniture, now exhibited at Dorland Hall, was designed by myself.

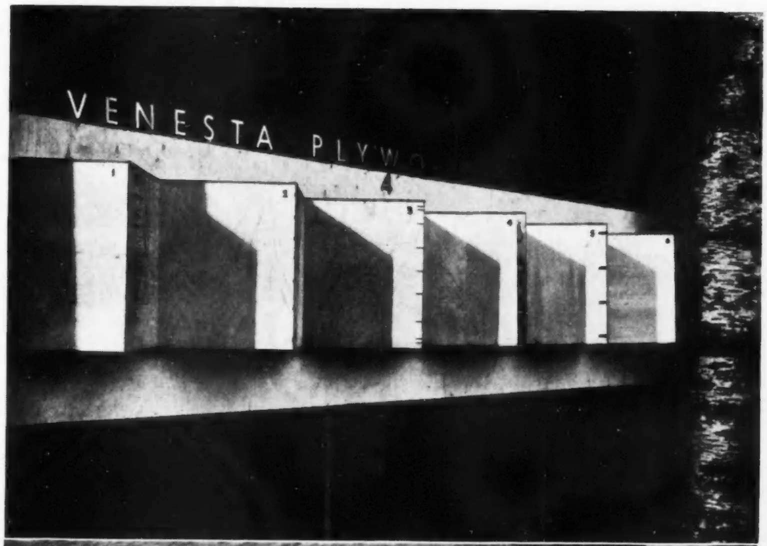
The five basic units are the work of Professor Schuster, of Germany, with whom I have had the privilege of collaborating in extending and introducing this furniture into England.

Professor Schuster's furniture is so rational and unmannered as to be inevitable, and in my opinion is the best solution of economic yet good class furniture which has yet been produced in this country at any time.

S. CHERMAYEFF



TECHNICAL DEVELOPMENTS AT THE B.I.A.



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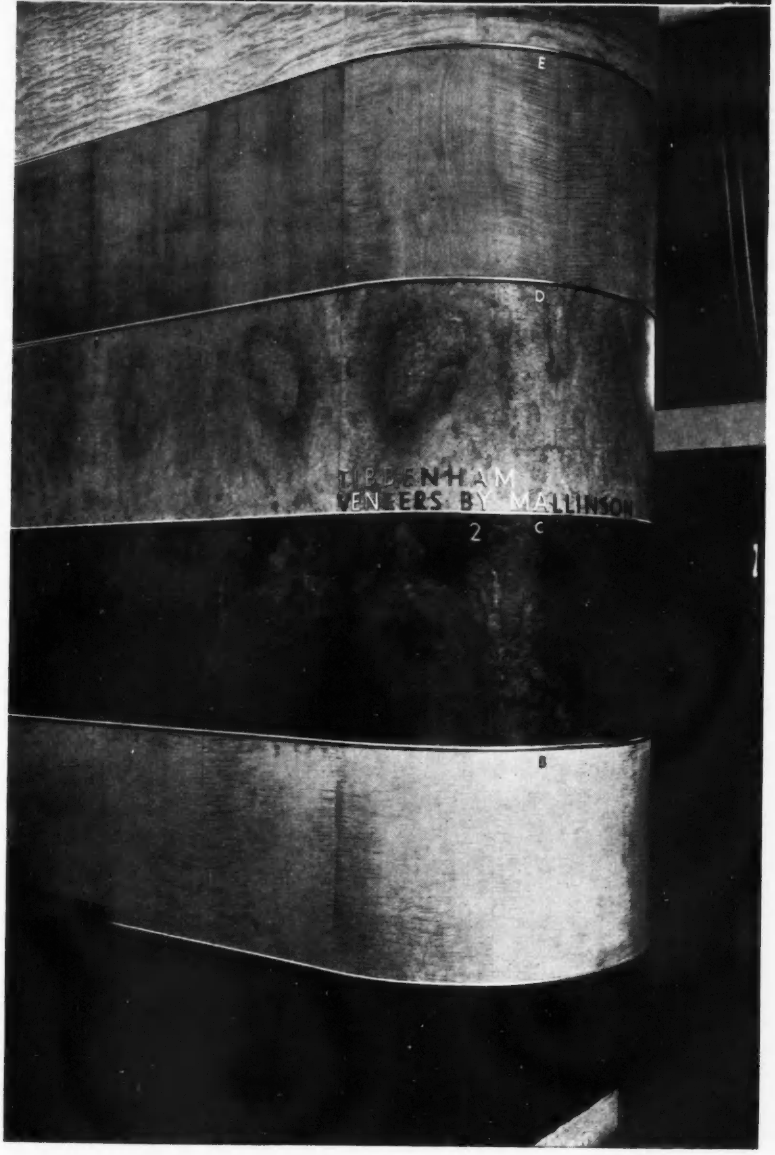


2

BY

WALTER GOODESMITH, A.R.I.B.A.

IT is gratifying to notice in this exhibition of British Industrial Art (at Dorland House until July 12) that in the majority of cases design, technical considerations and construction have gone hand in hand to produce an harmonious whole. Too often does an exhibition produce a predominance of one over the others. The dominant note of the exhibition seems to be the high average standard of work throughout. The Main Hall exhibits typical materials from their raw state, through the various processes of manufacture to the finished product. They are arranged in logical sequence so that it is possible for the trained eye to observe the limitations imposed on the manufacturer at successive stages and to appreciate more the finished article. In some cases the craftsmanship is superior to the design. Especially is this noticeable in several of the metal exhibits which, for pure quality of workmanship, would be hard to surpass. But the designs !

The larger exhibits have been fairly well arranged, but it seems high time that some better method of exhibiting collections of small samples was devised. Several of them, mounted on the usual backing board, have no merit, other than that of orderliness, to recommend them.

Generalizing, one feels that there is real " technical development," manifested by some exhibits in the subtle manner, and by others in a more sweeping manner. The sum total, however, is definitely a progressive step.

1. *Exhibit No. 4. Various methods of joining plywood.*

(*1*) *Pinned.*
(*2*) *Stapled.*
(*3*) *Stitched.*
(*4*) *Metal edged.*
(*5*) *Carey clasp.*
(*6*) *Lock cornered.*

On the right in its natural state is the birch trunk from which the plys are made.

Designed by Oliver Hill.

2. *Exhibit No. 2. Empire timber veneers, applied on curved surfaces. The woods show reading from the bottom upwards :*

(A) *Machutta.*
(B) *Figured sycamore.*
(C) *Maple burr.*
(D) *White ash burr.*
(E) *Weathered sycamore.*
(F) *Empire wood.*

Designed by Oliver Hill.

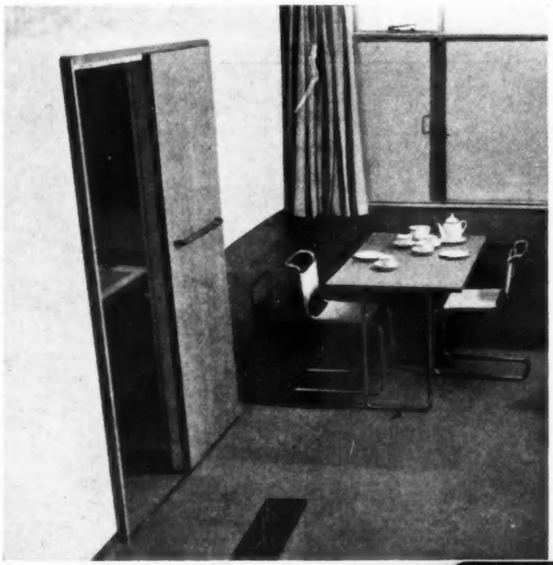
WOODS

The woods in the Main Hall are intelligently displayed, especially in the treatment of the curved features at each end (Fig. 2). These are covered with various Empire timber veneers, the junctions between which are formed with thin metal strips. The quality of the workmanship here is especially noticeable, the process of bending being a special one perfected by the manufacturer. Perhaps the most interesting exhibit in this section is that shown in Fig. 1, in which various methods of forming angle junctions in plywood are shown. The treatment of such angles has long been difficult to accomplish, but these examples show several solutions of the difficulty. An example of the birch tree is also shown in the natural state, the juxtaposition indicating the process through which the raw material must pass to produce the birch-faced ply, as is shown in the examples. This is an intelligent arrangement which stimulates the visitors' imagination.

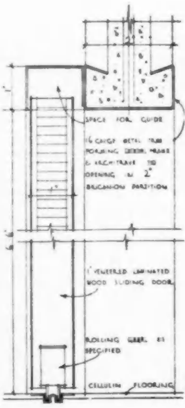
A general high standard of joinery work is apparent, especially in the bedroom on the ground floor, which was planned to show the relationship of natural and artificial lighting to the disposition of built-in furniture.

The use of laminated veneered wood is increasing. The very sound form of its section has much to recommend it, with its core of wood strips laid with alternating grain to avoid warping, and its covering of veneer in any required finish. It has been used on the sliding door and table in the Minimum Flat. (Figs. 3 and 4.)

The size to which one can now go in composite sheets of building board, faced with ply, is only governed by practical considerations in handling this material. A large single sheet 16 ft. 6 ins. by 8 ft. 6 ins. is used in the internal partition of the Week-End House. (Figs. 5 and 6.)

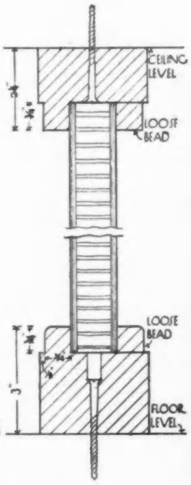


3. *Exhibit No. 50. The dining table, arranged to slide away into the corner, and the sliding door in the Minimum Flat are made from laminated board.*


SPACE FOR GUIDE
16 GAUGE METAL TRIM FORMING FRAME & ARCHITRAVE TO OPENING IN 2" PARTITION
1" VENEERED LAMINATED WOOD SLIDING DOOR
ROLLING GEAR AS SPECIFIED
CELLULIN FLOORING

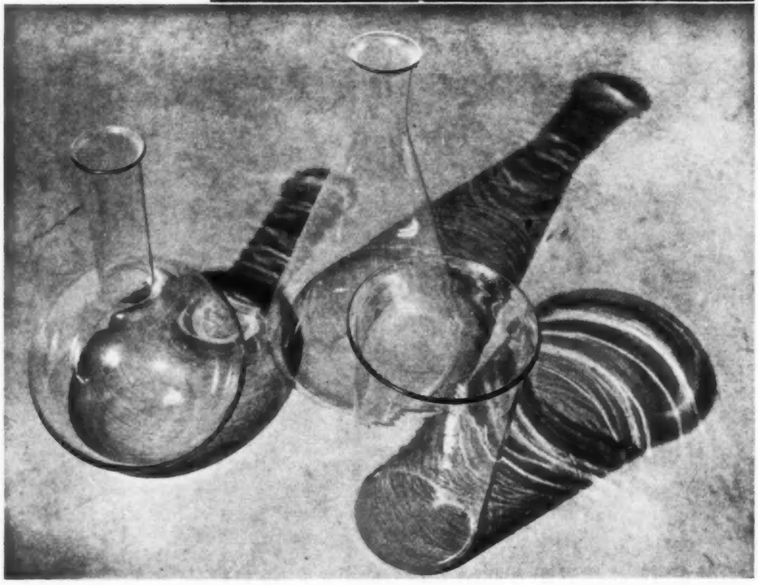
4. *Section through door in above.*

Designed by Wells Coates.



5 *and* **6.** *Exhibit No. 52. The large internal partition in the Week-End House is built from two thicknesses of plywood enclosing a single thickness of compressed fibre building board. It is quite rigid and is fixed at the top and bottom edges only.*

Designed by Serge Chermayeff.



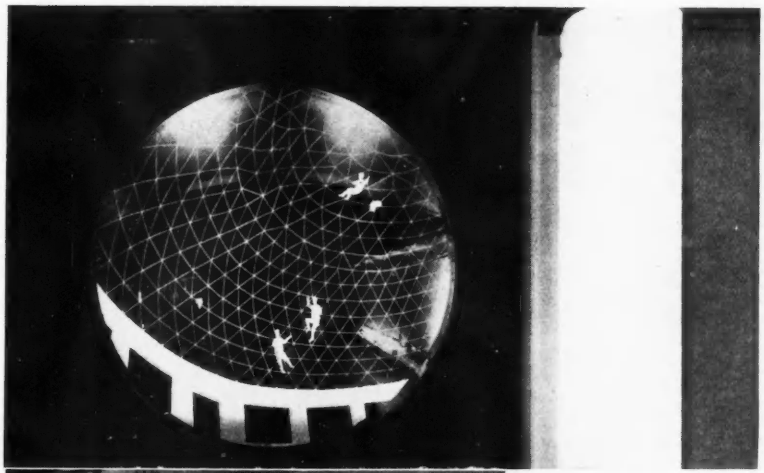
7. *Exhibit No. 1050. Utilitarian glassware made for the chemist. It has an unselfconscious beauty that we are only now beginning to appreciate.*

GLASS

The section devoted to glass indicates the possibilities of the material in a more complete manner than has heretofore been attempted. Apart from the excellence of much of the table ware, glass is shown as a material with a " third dimension." From the display exhibit of various types of glasses to the examples of bending and of surface treatment a very wide field is covered.

Striking new developments in form, colour and technique indicate a close co-operation between the designer and the industrialist.

The last few years have witnessed a marked increase of interest in the use of glass in building generally. It is unfortunate, however, that there is, as far as technicalities go, no material understood less by the building world. Comprehensive exhibitions of this nature, therefore, are of incalculable value.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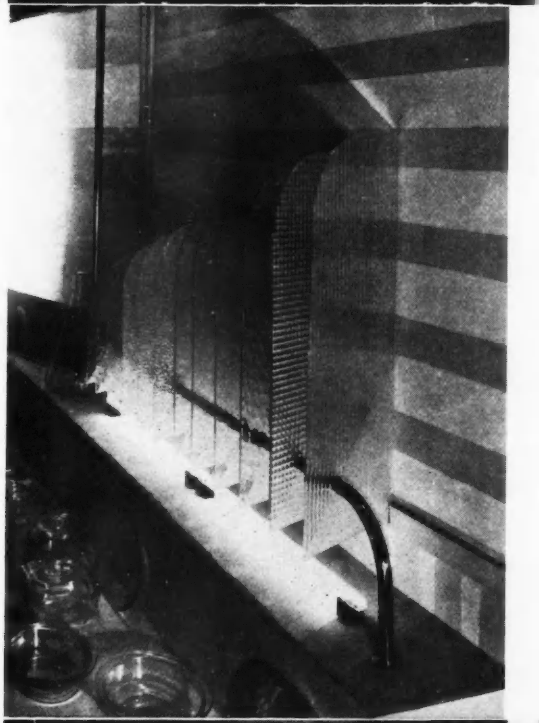
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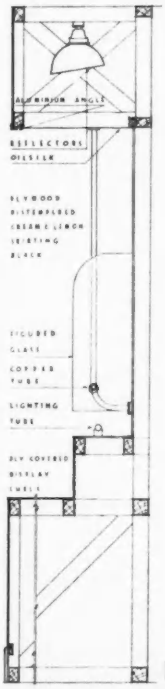

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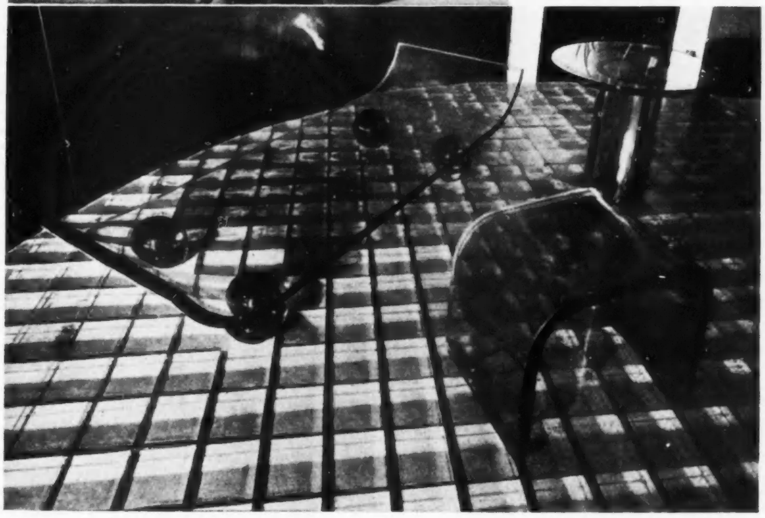

11

8. *Exhibit No. 1051. A convex mirror, with an illuminated sandblast design on its back. It has as its motif the construction of the first planetarium structure in reinforced concrete.*

Designed by Walter Goodesmith.

9. *Exhibit No. 1050. Types of figured, rolled and cathedral glasses, sandblasted over a portion of each area.*

Designed by Raymond McGrath.

The glasses here shown (from left to right) with designers' names in brackets are :
Cascade (R. A. Duncan).
Coptic (Paul Nash).
Cryptic (John M. Holmes).
Dewdrop.
Pattern G.
Small glistre.
Cathedral hammered.
Cathedral mottled.
Cathedral stippled.
Flemish small.
Cross-reeded (M. L. Anderson).
Reeded (M. L. Anderson).

On the shelf is shown heat-resisting oven-table glass.

Designed by Harold Stabler.

10. *Typical section through the glass display stands.*

Designed by Raymond McGrath.

11. *Exhibit No. 1070. Glass ensemble. The background is faced with dull grey silvered plate glass, ¼ in. thick. The floor is of clear glass in tiles 6 ins. by 6 ins. by 2½ ins. The couch is made from 1¼ ins. bent polished plate and is supported on four 8 ins. diam. glass balls.*

Designed by Oliver Hill.

AT THE B.I.A. EXHIBITION

GLASS—continued

The first exhibit of glass goes almost unnoticed through unfamiliarity. It is the floor surface in the Main Hall (Fig. 15) and is a good—though perhaps not quite successful—use of glass. The surface is somewhat slippery, which defect might be helped by raising slightly the surrounding joists.

The "Glass Ensemble" (Fig. 11) is rather an interesting "all-glass treatment" than a definite design for a room. The dull grey silvered plate glass, fine stippled on the face and bent on plan, is very successful over large surfaces. The polished plate furniture is remarkable as a bending achievement.

The display of samples in such a way that they are interesting as an ensemble, without sacrificing the individual quality of each, is a difficult problem. An interesting solution is shown in Fig. 9, where, with the aid of a continuous strip of light, the surfaces of the glass are picked out by edge lighting.

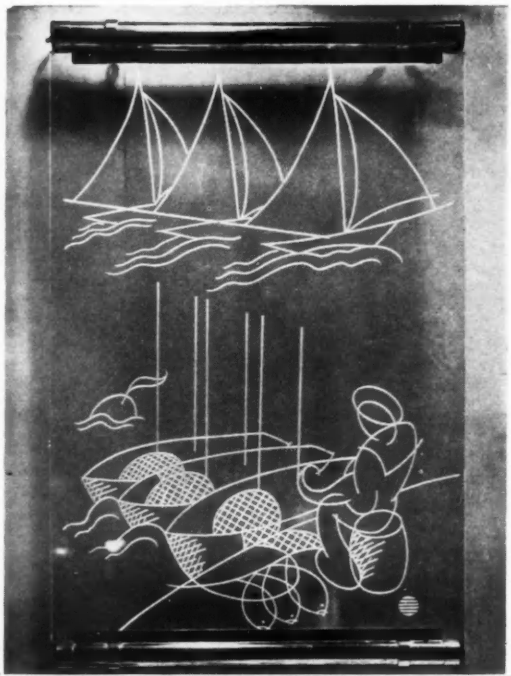
Convex mirror (Fig. 8). The back surface is completely mirrored first and the sandblast design is then "blown through" to the required depth in the glass. The provision of a lighting box behind enables light to percolate through the sandblast portion, the whole thus forming a combined mirror and lighting fixture. On the right is a light shaft, an example of bending white flashed opal.

Smaller glass bending in which some very skilful sharp bends, together with joining glass to glass, is displayed in Fig. 14.

The numerous panels of glass by Raymond McGrath incorporate either singly or in conjunction, the various treatments of surfaces and are virtually an encyclopædia of glass surface technique; in silvering, aciding, sandblasting, brilliant-cutting and bevelling.

The type of end-lighting fitting used (or misused) mostly for advertising purposes, has been elevated by a successfully designed exhibit shown in Fig. 12.

Great advancement in the use of glass in connection with lighting fittings has been made, and is mentioned further in the lighting section (page 17).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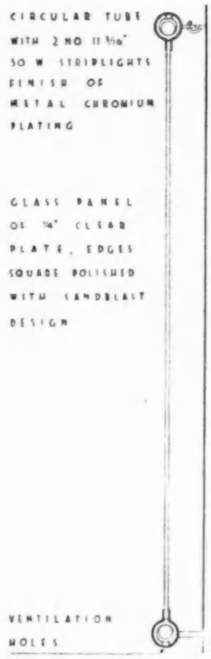
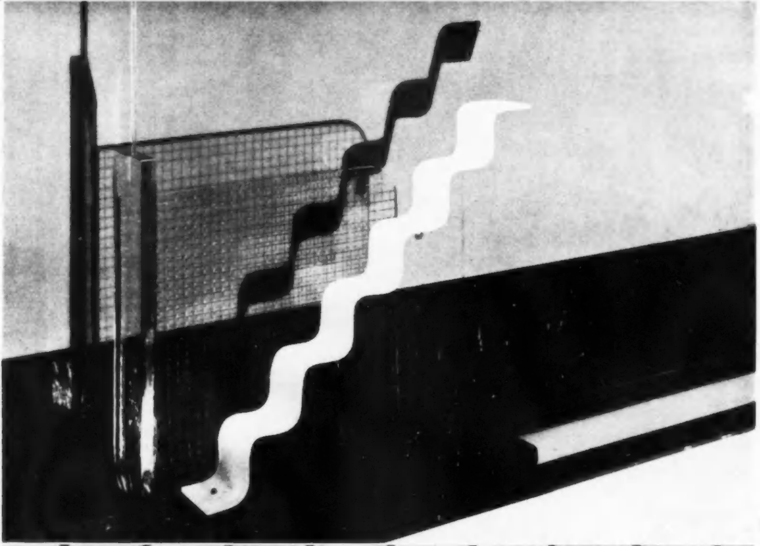

CIRCULAR TUBE WITH 2 NO 11 5/16" 30 W. STRIPLIGHTS FINISH OF METAL CHROMIUM PLATING
GLASS PANEL OF ¼" CLEAR PLATE, EDGES SQUARE POLISHED WITH SANDBLAST DESIGN
VENTILATION HOLES
13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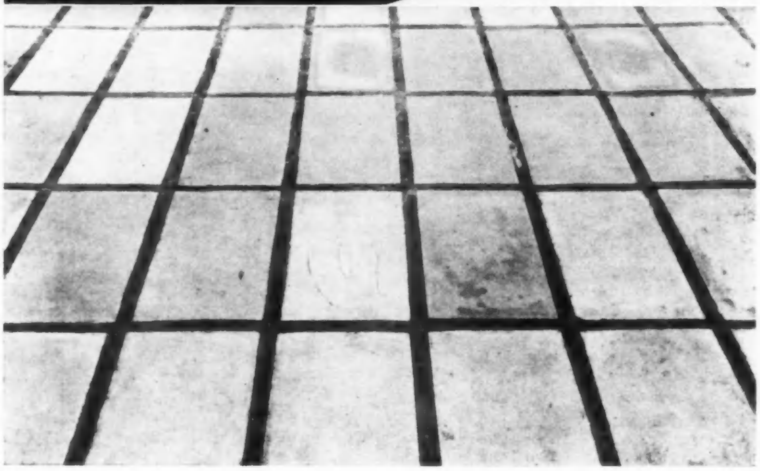
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12. *Exhibit No. 1052. Sandblast design on polished plate glass, lighted through its top and bottom edges.*

13. *Section through above.*
Designed by Raymond McGrath.

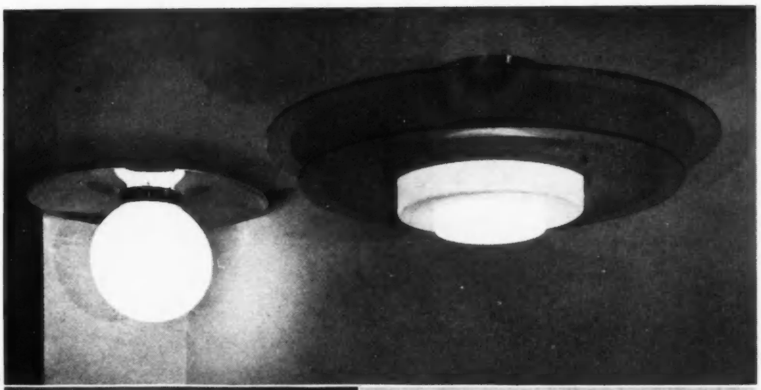
14. *Exhibit No. 1051. Glass Sculpture. An ensemble of bent shapes, and various types of glass.*
Designed by Walter Goodesmith.

15. *Exhibit No. 32. The floor of the Main Hall, composed of ⅞ in. thick dull white Vitrolite in 12 ins. by 6 ins. tiles.*
Designer of Main Hall, Oliver Hill.

LIGHTING

The lighting section demonstrates the enormous strides that have been made in the design of electric light fittings, where requirements are solved functionally and expressed æsthetically. The fittings are of clean design, based on simple forms, relying on beauty of material and fine finish for their attractive appearance. A careful attention to detail has resulted in a high degree of technical efficiency. Glass globes and shades are made of frosted clear glass and of clear crystal covered by a very thin layer of white opal glass, giving a complete diffusion of light with a small loss by absorption of not more than 10-15 per cent. The glass ware is fixed in position generally by set-screws with counter-nuts, but in the case of fittings (Figs. 17 to 20) with screw-in glasses fitted into strong metal threaded galleries—an interesting and efficient departure with distinct advantages.

The various forms of illumination such as direct, indirect, semi-indirect and diffused are efficiently presented. The designs range from small gallery fittings and desk-lamps to large ceiling pendants and standard lamps. On the whole the designs are well balanced, the weight of metal being happily combined with glass and enhanced by the variation in finish. A few fittings are still on the heavy side, and in some cases the multiplication of forms or combination of various contrasting shapes has been overdone, with an ensuing loss of unity and balance. The most pleasing fittings are those of simple forms, giving an easily visualized silhouette and relieving contrast in the use of materials employed.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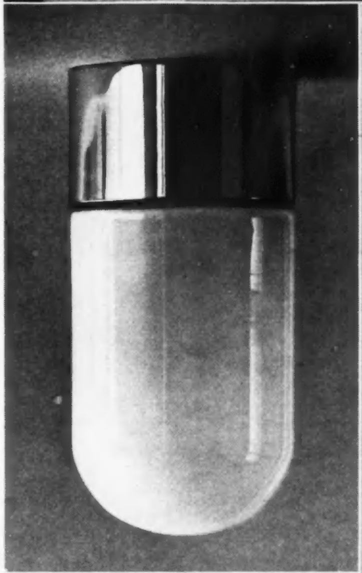
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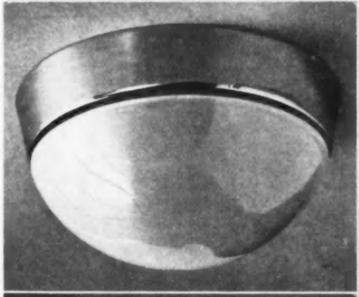
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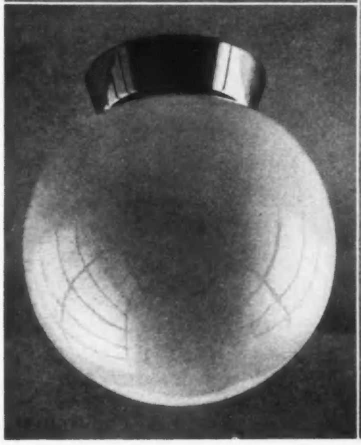
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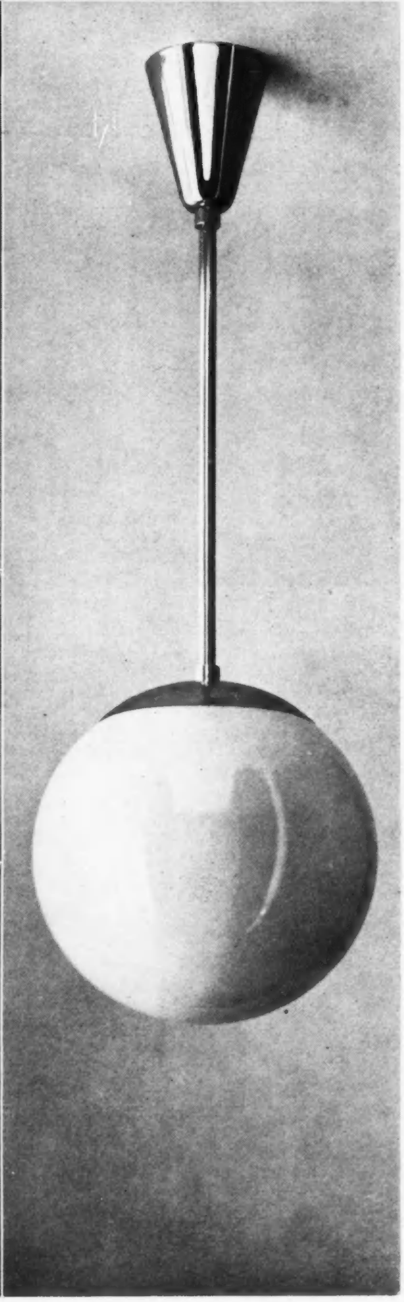
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16. *Exhibit No. 116. Giso fittings. On left is ceiling fitting with white flashed opal glass globe and chromium-plated gallery and reflector.*
On right is ceiling fitting with cylindrical white flashed opal glass globe, and glass discs, metal work chromium plated.

17 *to* **20.** *Exhibit No. 118. Ultralux fittings. In white flashed opal glass and chromium plated metalwork.*

17. *Small ceiling type.*
18. *Bulkhead ,,*
19. *19. Sphere ceiling ,,*
20. *Suspended sphere ,,*
Note the excellent gallery.

The glasses screw in to metal galleries.

Designed by A. B. Read.

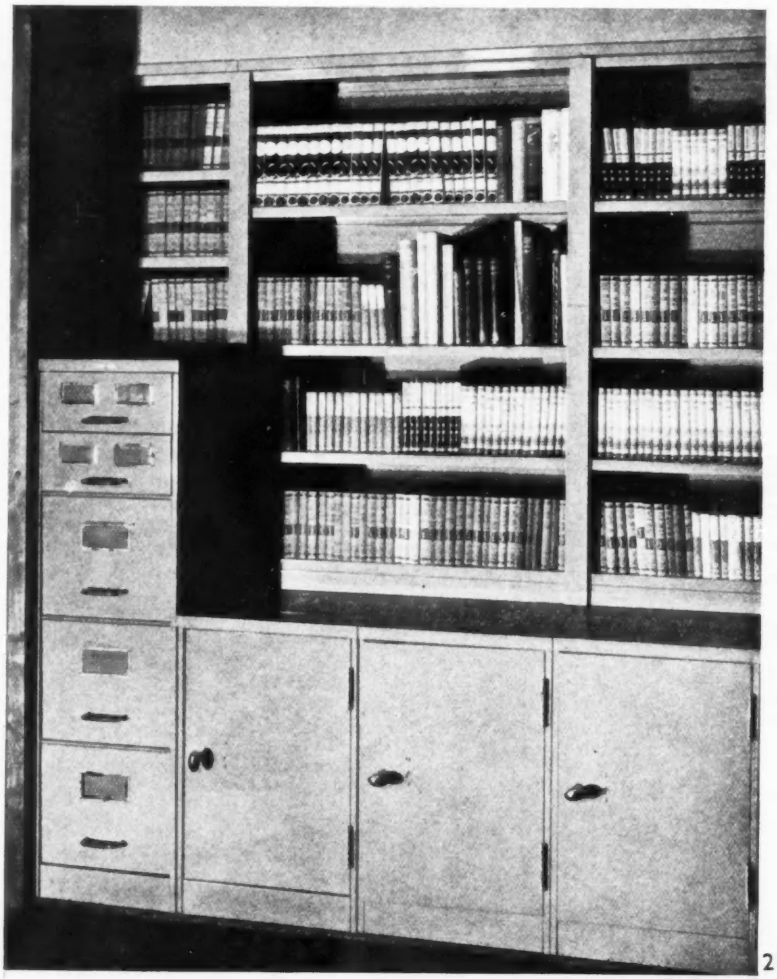
STANDARDIZED UNITS

The advantages resulting from the employment of new and more elastic materials in the interpretation of new ideas in the home, and the application of scientific methods to its equipment, are not the prerogative of the wealthy; but in order that these advantages may become common to every class of dwelling it is necessary to select types and units for individual domestic functions, i.e., living, sleeping, cooking, washing, and so on, and to standardize them on a basis of minimum cost and maximum utility.

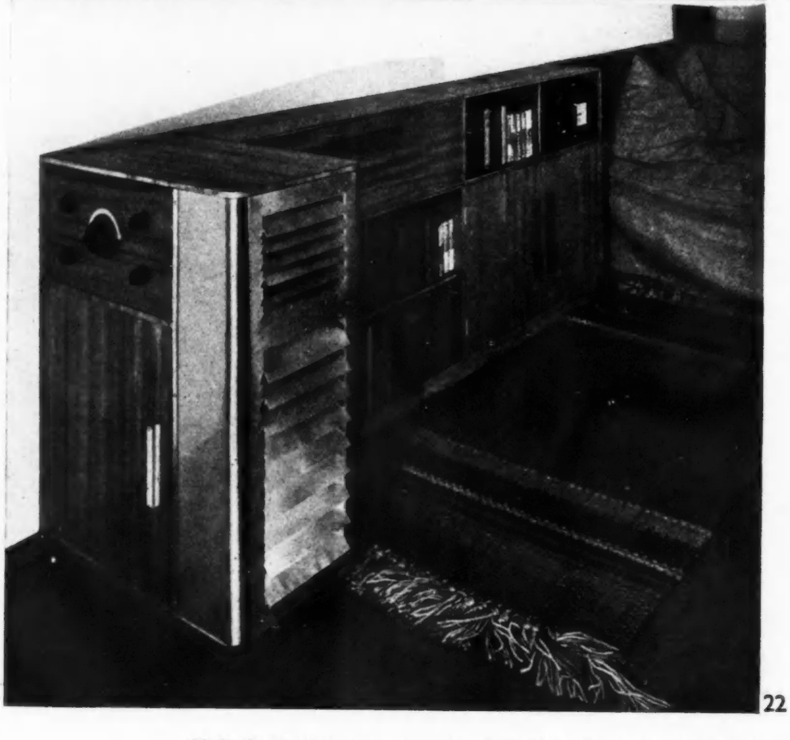
Standardization of unit-furniture for the living-room is not entirely new to this country; for many years we have been able to buy unit bookcases, fronted with leaded lights, to harmonize with period furniture, but it is only within the last year that there has been a real effort on the part of the manufacturers to produce cheap standardized units for the living-room of the twentieth-century home. A group composed of Isokon plywood units, and incorporating a radiogram and electric heater, is arranged in the living-room of the Minimum Flat (Fig. 22).

The close relation between cheapness and standardization of units for mass-production is particularly evident in the case of pressed steel equipment. Units that are popular, and made in thousands, often cost little more than half the price that must be charged for units of similar size and complexity, for which there is little demand.

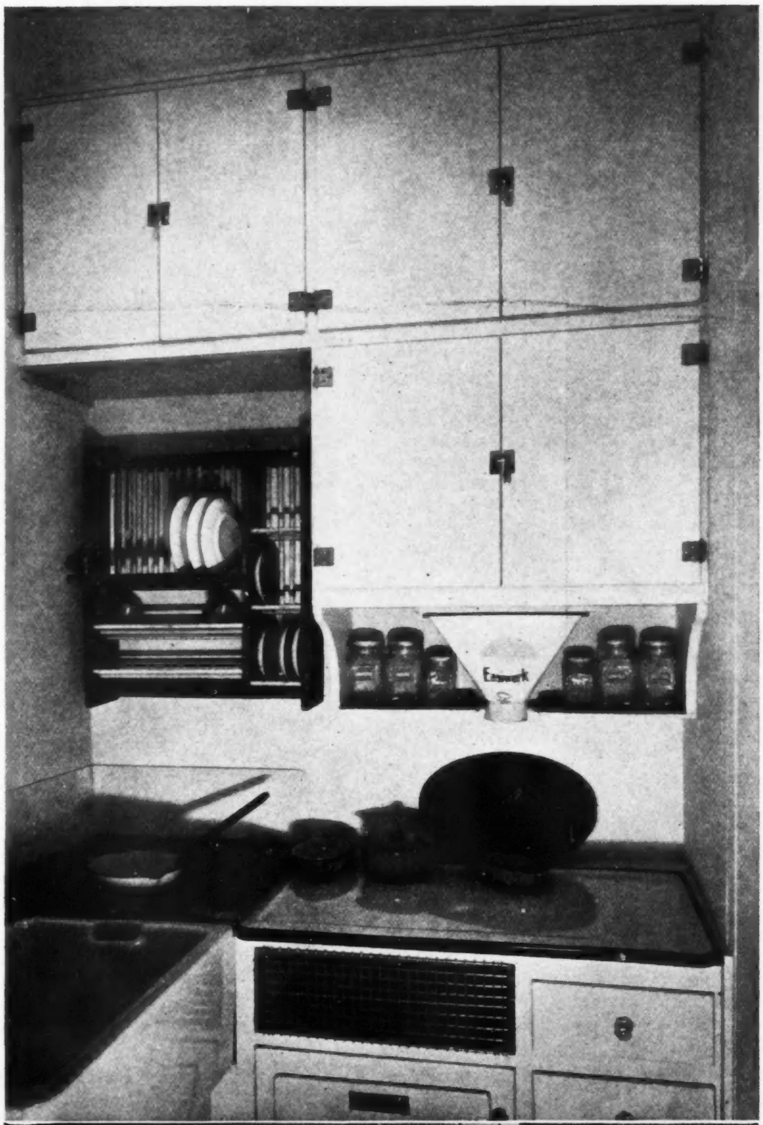
The manufacturers must, therefore, select types that are most needed, and develop them, on a basis of demand, in order to arrive at the perfect unit for standardization. In the case of pressed steel types, this process has been going on for a considerable



21. *Exhibit No. 49. Built-in steel filing cabinet, steel cupboards and steel shelving in the Study. The group is composed from Sankey-Sheldon standard units. Designer of the group: R. D. Russell.*



22. *Exhibit No. 50. Built-in cupboards, shelves, radiogram and electric fire in the Minimum Flat. The group is composed of Isokon standard units. Designer: Wells Coates.*



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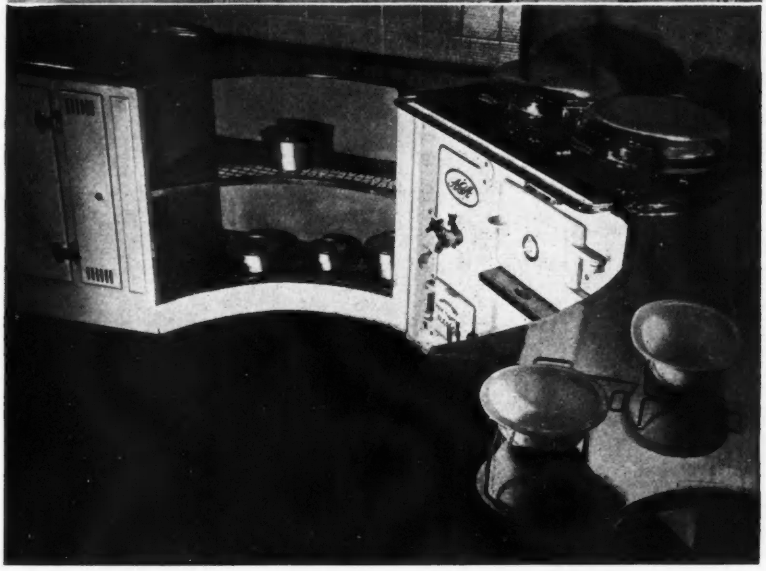

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number of years, and still there are slight changes to be made. Shelves, for instance, are now adjustable every inch, whereas a few years ago the standard margin was 2 in., and recently a vertical cover strip has been introduced to improve the appearance of the junction between shelf units, and to cover the shelf adjustment piercings.

The normal green colour of such equipment is more suited to the office than to the home, but when the metal is finished with a bright enamel and the knobs and handles chromium-plated, there is a surprising transformation. A group composed from pressed steel units thus treated is arranged as a built-in fitting in the Study (Fig. 21).

Standardized kitchen equipment has been obtainable for many years, but development and improvements are constantly being made. In exhibition kitchens generally, and at Dorland Hall in particular, there is evidence of co-operation between the manufacturer and the architect.

The co-ordination of kitchen fittings must be based on the most logical process of movement, and the design of the fittings themselves on efficiency and cleanliness, and their sizes dictated by the very limited space in the typical present-day house or flat.

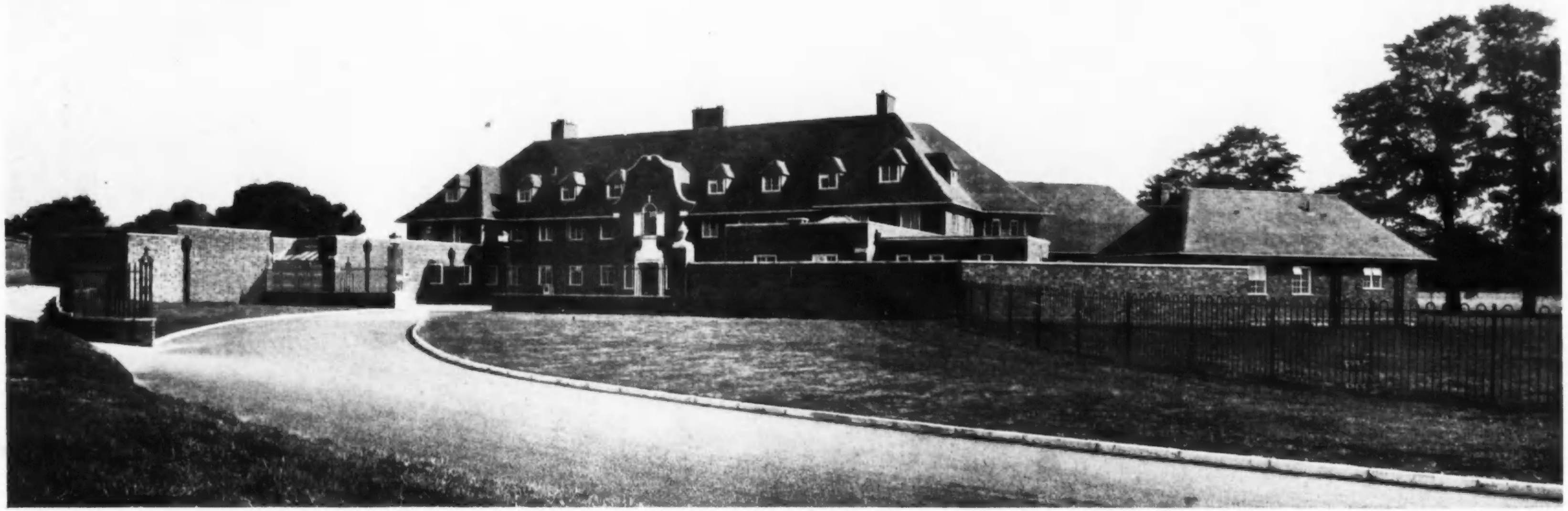
One of the most interesting developments arises from the attempt, on the part of the architect, to maintain a uniform height for all built-in fittings, arranged in logical relationship one to another, in order to provide the maximum, and most convenient working space, and there are signs of co-operation between the several manufacturers in the production of units of equal height, to enable a table top to run unbroken over the cooker, refrigerator and cupboards, and to link up with the draining board and sink. Monel metal and Staybrite are in general use for such surfaces.

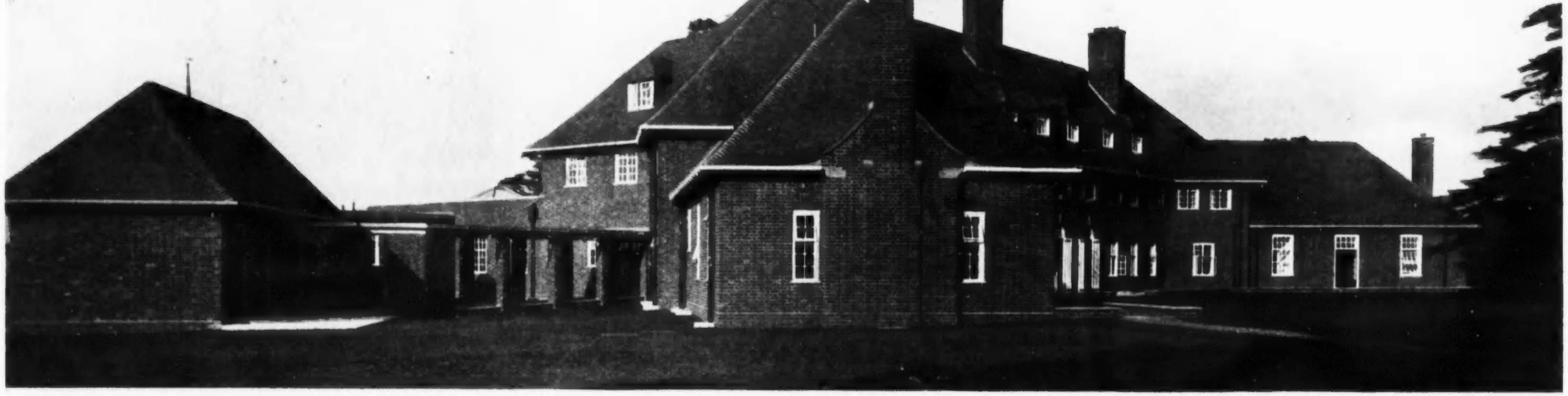
23. *Exhibit No. 50. A kitchen cabinet, in the tiny kitchen of the Minimum Flat, built up from standard Easiwork units. Designer of the group: Wells Coates.*

24. *Exhibit No. 103. A coke or anthracite cooker arranged as part of a co-ordinated kitchen scheme. On the extreme left is a monel metal sink. Designer of the group: Mrs. Darcy Braddell.*

AT THE B.I.A. EXHIBITION

THE MARY STEVENS MATERNITY HOME, STOURBRIDGE

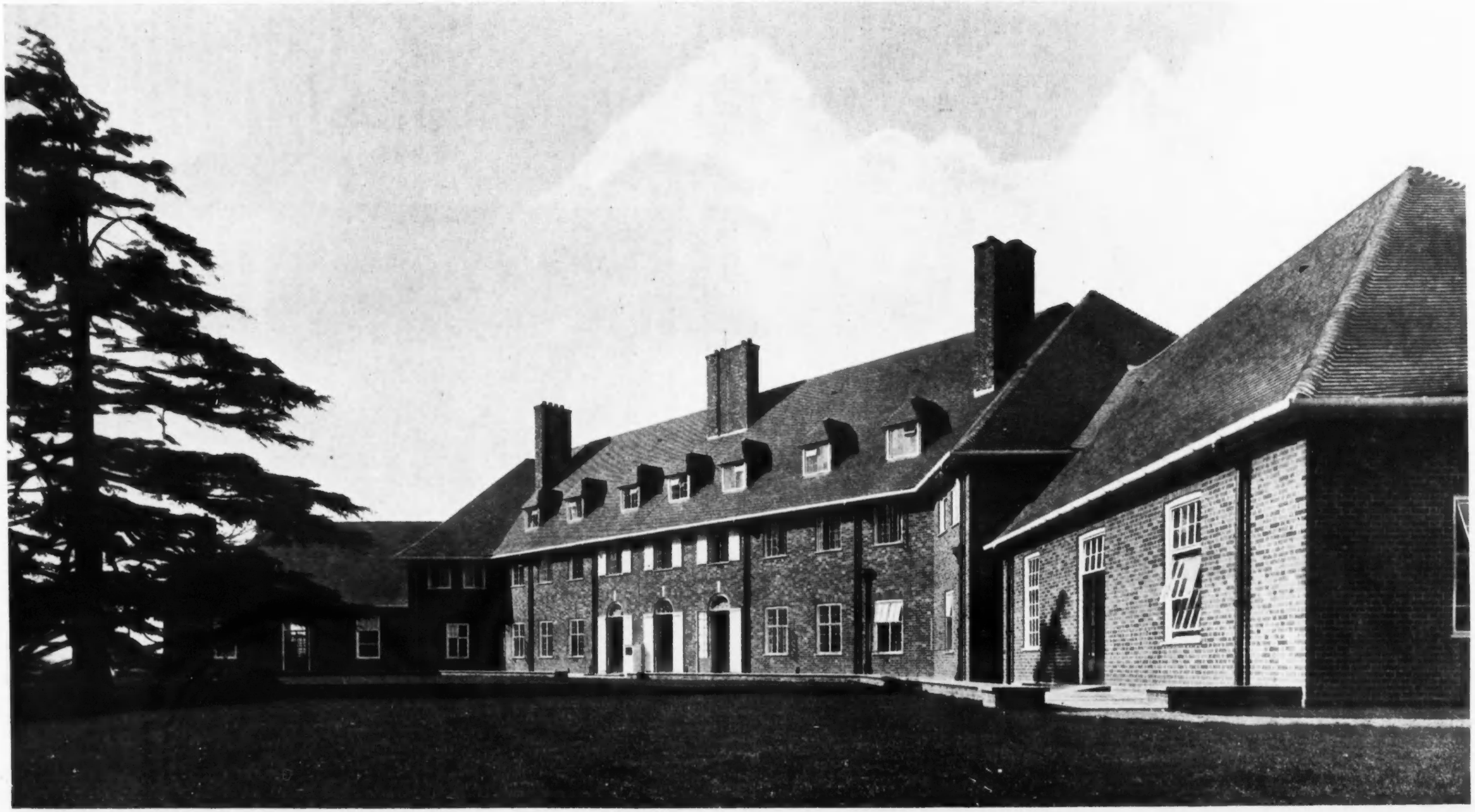




This maternity home has been designed with a domestic rather than an institutional character, and is constructed externally of Black Country rustic brindled bricks, with flush joints. The roofs are covered with sand-faced tiles, with swept valleys; and the windows throughout are of metal.

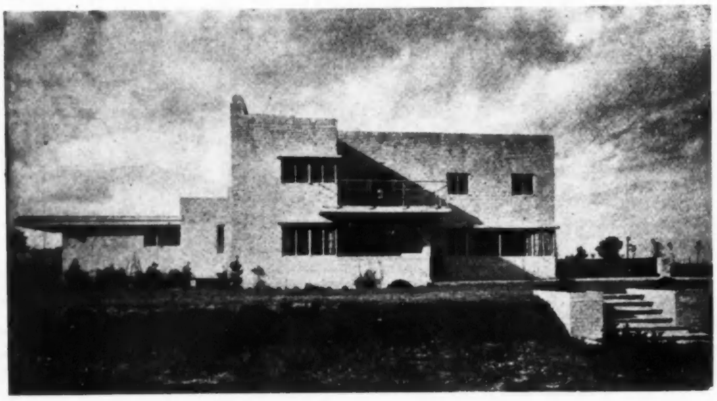
The home is situated on an elevated site in grounds of more than six acres, sloping towards the south, and these have been laid out with lawns, hard tennis court, a large walled kitchen garden and greenhouse.

The illustrations reproduced above show the north-western front to the approach road; an end view, looking in a north-easterly direction; and (below) the south-eastern front, containing, centrally, the administrative department. Other photographs, plans and elevations are published in a Supplement with this issue.



DESIGNED BY MARTIN AND MARTIN AND W. H. WARD

LITERATURE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Three houses from the new edition of THE ADVENTURE OF BUILDING *(reviewed on this page).* **1** *: In Wiltshire ; a departure from tradition.* **2** *: In Cornwall ; illustrating the value of simple form.* **3** *: In Hertfordshire ; two houses forming an harmonious group.*

AN ADVENTURE IN COMMON SENSE

The Adventure of Building. By P. Graham. London : The Architectural Press. Third edition. Price 6d. net. (Special price for architects : 2s. per dozen copies.)

THIS little book, of which 51,000 copies have been issued, is likely to be useful until such time as every client is "on the panel" of an architect ; and that, we should say, is many generations ahead. Meanwhile the client must use his common sense, a commodity he often buys at the high price of experience. *The Adventure of Building* aims to make common sense cheaper.

The ironical exclamation of a patient, that his doctor "never takes his own poison," has no parallel catch with reference to an architect. For the latter frequently lives in a house designed by himself, and gains thereby an invaluable experience of the client's point of view. It teaches him to be a realist, and to forestall those unreasonable regrets of his clients that some dining-room is not two feet wider, or some stair a half-inch less in the risers ; to explain to the layman and his wife the effect of their restrictions and requirements, in the language of the foot-rule, needs infinite patience and an orator's gift of exposition. The meanness of sparing the ha'porth of tar, as well as the extravagance of some blotch of a bow window, have equally to be brought to the building owner's conscience. At such crises Mr. Graham's tract can be slipped into the client's hand with excellent effect, for the author defines in it the proper attitude of the client as an attitude of trust. Not that one wants the client to be credulous, or to be spoon-fed with ideas, for in such cases the spirit of adventure quickly disappears. But when he is wavering between six opinions of his own, plus ten suggestions from the friend he beat at golf, he must realize that the architect is the man to give him a determined and egotistical desire for the right thing.

The point that a builder cannot obtain competitive estimates of cost is one that should be more widely exploited by the profession. To judge by the present state of the world, and the number of conferences on decaying mammon, the ordinary man wants a good deal of reassuring that if he spends money he will see an adequate return. The architect must bear in mind therefore the selling value of his work, in case the owner has to part with his home owing to a caprice of fortune or untimely end. Any eccentric arrangements of rooms or stairs, or special features, should be occasions for the architect's discountenance, and it would need all Mr. Graham's tact to remind a hearty client that we are all mortal and cannot take that cocktail bar out of this naughty world.

P. M. STRATTON

NOISE IN BUILDINGS

The Reduction of Noise in Buildings : Recommendations to Architects. By Hope Bagenal, A.R.I.B.A., and the late P. W. Barnett, A.R.I.B.A. *Building Research Bulletin*, No. 14. London : H.M. Stationery Office. Price 9d. net.

IN this age of noise the *Building Research Bulletin*, issued last week by the Department of Scientific and Industrial Research, containing practical recommendations to architects for the reduction of noise in buildings, should prove of immense value.

Following is a summary of the Report :

SITING OF ROOMS WITHIN A BUILDING : After emphasizing the importance of making the best possible use of the quiet side of a site, the Report mentions that the roof floor above the cornice, if set well back behind a solid parapet, is usually relatively quiet and may be used for important rooms, but the upper floors below the cornice tend to be noisier than the ground floor owing to reflection from opposite buildings and the road paving. . . Sound insulation is in all cases easier to accomplish at ground-floor level than on the floors above.

WALLS WHICH ACT AS LOUD SPEAKERS : A sound-resisting structure must provide against air-borne noises percolating through interstices of the fabric of a building or through openings, and must also provide against sound transmissions due to a diaphragm action of walls, floors, doors or windows, that is, against a wall or floor acting as if it were the cone of a huge loud speaker; this, the Report states, is by far the most important factor causing noise transmission in modern buildings. Thirdly, it must provide against transmission of sound vibrations conducted along or through the structure. The first of these means of entry for sound can be combated by air-tightness, the second by massive and rigid construction, and the third by the use of non-homogeneous structure.

AIR-TIGHTNESS: The walls and floors of a building should be carefully caulked. Openings for hot-water pipes and electric conduits must be sealed up. In the case of hot-water pipes the seal should be of such a nature that it will give to the thermal movements of the pipes and also withstand the high temperatures involved; it must not be so rigid as to impart vibration of the pipe to the surrounding structure. Ducts for any purpose must not be driven through carefully insulated walls or floors. Junctions of partition walls with ceilings and with other partitions often develop shrinkage cracks, and should be specially blanketed.

DIAPHRAGM ACTION OF WINDOWS: In the case of windows, most of the sound striking the glass is reflected back, but owing to the low thickness-to-area ratio of the panes themselves (and the windows as a whole) that small portion of the sound energy which is not reflected back is able to vibrate the panes and the window as a whole, causing them to act themselves as sources of sound. The heavier and more rigid the window frames and the thicker and smaller the panes, the less the diaphragm effect will be.

THE RUMBLE OF HEAVY TRAFFIC: Since sounds of low frequency more easily excite diaphragm action, mass and weight are more important when the noises to be excluded are low in pitch, such as the rumble of heavy traffic. If the benefit of mass cannot be taken advantage of, then reliance must be placed upon a carefully sealed partition of composite structure in which the maximum use is made of "air-space" *not bridged* or *bridged at as few points as possible*, and of materials of dissimilar elastic properties

STEEL-FRAMED AND REINFORCED CONCRETE STRUCTURES: In the case of a steel-frame structure it is possible by means of anti-vibration mats under stanchions, and the insulation of joints at bearings, to do something to introduce discontinuity in the actual frame itself. Moreover, the steel frame is normally clothed for protective purposes in materials of somewhat different elastic properties, and this serves to some extent to provide discontinuity between the skeleton and filling membranes, such as panel walls. In the case of the reinforced concrete frame structure, it is obviously more difficult to introduce discontinuity in the actual frame, and the skeleton is often monolithic with the filling membranes. It follows, therefore, that the reinforced concrete frame structure, when employed for such buildings as hospitals, flats and hotels, in which mechanized equipment is unavoidable, presents a particularly difficult acoustic problem.

OPEN WINDOWS AND NOISE: "It is impossible," the Report states, "on noisy sites to defend buildings against traffic noises unless the principle of closed windows is accepted. Large open vents in a window admit as much noise as an open window itself. The ingenuity of ventilating engineers should be enlisted in solving these difficult problems. If air is to be drawn in from a noisy site it should traverse a duct having a large area of sound absorbent baffles arranged in it."

PRACTICAL DATA: To illustrate the practical usefulness of the Report, it may be stated that it includes in tabular form the information available concerning 121 various types of structure (each illustrated by a diagram) and materials as regards their efficiency in reducing air-borne sounds when used for partitions, floors, etc. For use with this table the Report also contains an intensity scale of common noises and typical localities reproduced from various authorities.

THE DISAPPEARING CITY

The Disappearing City. By Frank Lloyd Wright. New York: William Farquhar Payson. Price $2.50.

THIRTY years ago, when the architectural world was steeped in eclecticism, and content, even "inspired," to revive dead styles, Wright sensed the part that the machine was to play in architecture and in life, and he fashioned his buildings accordingly. He was among the first, if not the first, to treat interior space freely. He has worked constantly for decentralization of cities and a new integration based on the intelligent use and unending possibilities of the machine.

The Disappearing City is a reiteration of the creed upon which he has based his life work. He sees in the city and in the present economic system only perversion and sterility; the unearned increment of rent as a self-destroying monster. But he foresees a new civilization based on the intelligent use of the very machines to which man now subjects himself, and he shows the gift of freedom correlated to new sense of space—"the original basis of democracy"—to be the logical product of such mechanical means as we have at our disposal, now, to end the illogical congestion and destruction of man in cities.

"Modern architecture now comes with its new demand for a finer integrity to unite 'modern improvements' in the service of the individual. Integration as against centralization is the true corollary of the ideal 'Democracy' and decentralization and integration come in as architecture to go to work over the whole land to create a better basis and recreate the framework and background of a modern life run too far out of human scale. Man must now be brought back to his inheritance that he may be a whole man. Nor is there longer excuse for him to be the parasite that centralization has been making of him. . . monarchy was the ideal of centralization . . . the unit—no emphasis upon individuality—compelled to revolve around about a common centre, so democracy is the ideal of integration . . . many units free in themselves built up high in the quality of individuality, functioning together in freedom."

In the first part of his book he destroys the town as we know it. Then he proceeds to rebuild it as Broad Acre City.

Publication Received

Touring London. By W. Teignmouth Shore. London: B. T. Batsford, Ltd. Price 2s. 6d.

WHAT IS TO BE DONE ABOUT

THIS?

[In the preceding article of this series Penates pointed out the advantages of the modern developments of standardization and pre-fabrication and discussed American methods. This week Mr. Maxwell Fry takes a specific material and trade, and shows the advantages of standardization and its dependence upon a new type of house.

*The following have already appeared:—(March 29) 1. The Speculative Builder, by Penates; (April 5) 2. The Speculative Architect, by Edwin Gunn; (April 12) 3. Building without Guidance, by Stanley C. Ramsey; (April 19) 4. What the Public Want, by Edwin Gunn; (April 26) 5. The Housing Problem, by Percy Morris; (May 3) 6. The Building Centre Competition, by E. Maxwell Fry; (May 10 and 17) 7 and 8. How the Architect can use the Building Societies, by H. C. Burdett; (May 24) 9. The Housing Act, by our Parliamentary Correspondent; (June 1) 10. Building Society Finance, by Penates; (June 8) 11. Factors in Cost, by L. J. Gollop; (June 29) 12. The Pre-fabricated House, by Penates.—*ED., *A.J.*]

13. Standardized Woodwork

[By E. MAXWELL FRY]

THE first thing to realize in a discussion or in an examination of this question is that woodwork is already highly standardized, but to patterns that are largely out of date, wasteful and inapplicable to the type of housing which it is becoming more desirable every day that we should build.

What has, in fact, happened is that architectural woodwork in vogue twenty-five years or so ago has, without passing through any logical system of selection, gradually found its way into the factories that have replaced the workshops of the past.

The process of replacing old conditions

of workshop labour by machinery has been a gradual one, and in only a few instances does one find a full equipment of machinery capable of dealing with every type of moulding. But today the machine engineer may be said to have produced machines fitted for most of the work covered by the title of this article, and there is no possibility that we shall be able to turn from machines to any other process of manufacture.

The position, therefore, must be generally accepted, that we are to deal with the process of machine manufacture as intelligently as possible, having regard to the nature of the work for which it is intended. Before actually surveying this field, it might be well to look to other examples of standardization. The metal window naturally leaps to the mind. And rightly so, for it shows quite clearly that the collaboration of architect and industrialist can work to the very great benefit of architecture generally by standardizing a unit capable of wide adaptation.

The metal window was standardized to meet the demands of a vast programme of housing, entered upon after the war. The normal conception of the house unit was that of a cottage, and the standard metal window resulted. No one can but admit that wherever it was used, even with only moderate intelligence, its presence as part of the building had a salutary effect on general proportions.

In course of time the control of small housing tended to pass from architects to speculative builders, with the result that new and more or less incongruous units have been adopted, with results as disastrous as the others were salutary. One must, therefore, realize at the outset that it is useless to standardize the parts of buildings unless it is done to some conception which is in the minds of those who seek to standardize. Standardize to what end, is the question.

Now if we turn to survey the work of the speculative builder we will discover the truth of my opening remark: that standardization has been carried to great lengths. But there is little or no correlation between one standardized part and another. It is as though those in charge of factories had opened at random old books of architectural drawings of a period we are now trying to forget, and had selected from these quite haphazardly whatever tickled their fancy.

You can buy ready-made today a particularly hideous type of bay window, an even worse assembly of front door parts, and a very motley collection of windows, besides, of course, a whole assortment of mouldings, fireplace surrounds, etc. A catalogue of mass-produced (and perhaps that is the right word) woodwork offers to the uninitiated no guide towards good taste. Perhaps there is no reason why it should, but it appears to me important that if architects are to take any hand in the standards of architectural woodwork, and hope by their collaboration in some way to control the design of building into which this woodwork is fixed, that they should have a clear idea of the type of house for which the parts are intended. If the villa type of architecture is to continue indefinitely, there is no cause to interfere, for most of the products for the speculative builders' villa are already mass-produced and carefully catalogued.

We have first to decide that the villa is out of date. Once that is settled, and once we can get manufacturers to agree with us on that point, then we can turn to standardizing the parts of something better. It is quite obvious to anyone looking even at the problem for the first time that a great deal can be done to simplify mouldings and correlate the various parts of building. One could indeed go quite a long way by a sort of negative process of whittling down by the application of normal commonsense: eliminating frills that no longer have anything to do with the matter. But I cannot imagine that such a method would be ultimately successful, since so much which is at present mass-produced is not only in itself incongruous and out of date, but bears no relation whatsoever to the other parts of the building to which it is fixed. That would be no satisfaction for architects unless they could command the whole field.

So, therefore, if we are to take any vigorous part in a possible collaboration with manufacturers of architectural woodwork, we are forced to work to a very clear mental picture of the story of domestic architecture we want to see built, and unless this picture is very forcibly present in our minds, our collaboration is likely to be of little use.

The problem is severely practical, and for the moment, at any rate, matters of taste can be taken as read until we have arrived at an acceptable solution of the small domestic building, not being above using the best out of the villa type of house.

Finally, there is the question, still being debated by certain architects, as to whether it is not beneath the dignity of the profession to soil its fingers by contact with a trade so closely connected with speculative building. The answer to this criticism is, I think, that control lies with ideas. If the architect's conception of domestic architecture is both a newer and a better one than that of the normal speculative builder, then his intervention in the field of standards can do him no possible harm, and a great deal of good. If the work is well done, it will give architects an equality of competition and help to remove the general misconception concerning his comparative uselessness.

EASY TERMS
PLANS APPROVED

QUESTIONS THAT ARISE

Easement of Light

¶ A. E. T. writes: "*A client of mine has property in a road which is about 30 feet wide. The houses opposite were about 20 feet high. These houses are now pulled down to make way for premises about 50 feet high. My client carries on a business on the ground floor as a jeweller, the side window being used for watch repairing. It seems that his light will be badly affected, but the question arises whether, being on a main thoroughfare, he will be able to claim for ancient lights. He has enjoyed his light, which faces south, for well over 20 years, the sky having been visible from his work bench over the top of the old premises. He also has a sitting-room on the first floor and a bedroom on the second floor, both facing the road. The light of the latter rooms will also be affected, but the main question concerns the ground floor light, which is necessary for his business.*

"*I shall be glad if your experts can let me have comments on this case, or any references to decided cases with similar circumstances.*"

In order to establish a claim to an easement of light, it is necessary to show that it has been acquired either by a Deed of Grant, or by 20 years' continuous user under the Prescription Act 1832.

Once an easement has been acquired, it is necessary to consider the quantity of light that can be claimed by the owner of the easement.

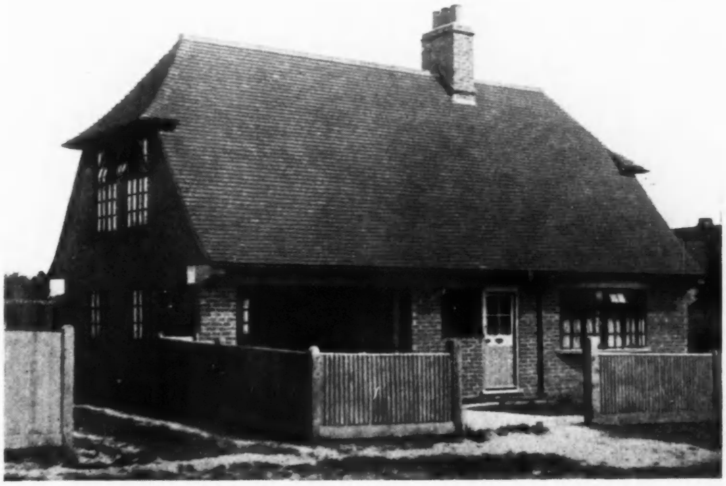
The owner of an easement has no right to an unlimited amount of light, but only a right to sufficient light for ordinary domestic purposes.

There is no hard-and-fast rule as to what is sufficient for ordinary domestic purposes (*Colls* v. *The Home and Colonial Stores, 1904 A.C. 179*).

It was decided recently in the case of *Price* v. *Hillditch, 143 L.T. 33*, that it makes no difference that the light enjoyed for over 20 years was sufficient for special purposes, viz., watch repairing—the owner of the easement is still only entitled to the amount of light as set out in *Colls* v. *The Home and Colonial Stores, supra.* Provided the watch maker can show that he has had the light for 20 years, and that at the present time there is not sufficient light left for ordinary domestic purposes, he has a right of action, but if after the diminution there is still sufficient light for domestic purposes, but not sufficient for carrying on his trade, then in my view he has no cause of action.

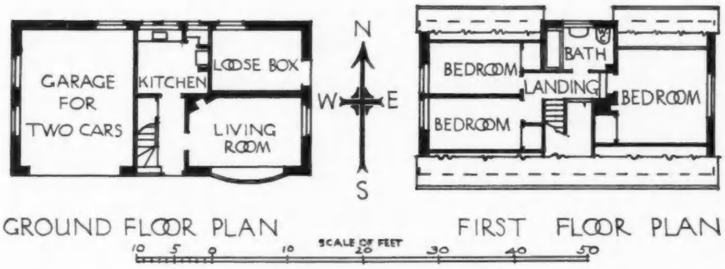
E. F. I.

COTTAGE AT SEAFORD



DESIGNED BY POWYS AND MACGREGOR

This chauffeur's cottage has been designed to provide a garage for two cars, a loose box for a pony, and accommodation for a man and family, that is, living room, kitchen, bathroom and three good bedrooms. It cost £825 and is built of 14 ins. hollow walls of red hand-made bricks and the roof is covered with hand-made tiles. The stairs, and all external joinery, are of English oak. The heavily projecting eaves rest on continuous concrete lintols for the full length and thickness of the north and south walls, and give stability and resist any thrust from this roof which may not be taken by the collars and ashlaring.



GROUND FLOOR PLAN FIRST FLOOR PLAN

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Rent Restrictions Bill

DURING the concluding stages of the Rent and Mortgage Interest Restrictions (Amendment) Bill in the House of Lords, Lord Dynevor moved a new clause to exempt certain agricultural estate cottages from the provision of the Acts amended and continued by the Bill. He said that the object of his clause was to give the agricultural estate-owner and landlord the right to get possession of a house of the rateable value of £13 or under without first going to court. The principle of such discrimination in favour of the agricultural landlord was established by the Finance Act of 1911.

Lord Gage, replying for the Government, said that the clause would be a little severe on the tenant. It was conceivable that an unscrupulous landlord might play on the ignorance of his tenant. Moreover, if the clause were adopted, agricultural landlords would be treated quite differently in respect to legal procedure from other landlords who were obliged to prove their claim to possession of protected houses. He could not see why agricultural landlords should not do the same. He admitted that there were special grounds which might justify an agricultural landlord acquiring possession of cottages, but those were met in the Bill. On the whole, the system of the agricultural certificate was working fairly well. It was the desire of Lord Dynevor that once a landlord had obtained possession of a cottage, all control of tenure and rent and everything else should disappear entirely. That proposal ran counter to the whole principle of the Bill. It was the desire of the Government to increase the pool of small houses and to retain as many cheap houses as they could. Under the new clause, once the landlord got possession of a cottage it could be let at a much higher rent to a week-end tenant.

The new clause was carried by 49 votes to 22.

Lord Jessel moved an amendment to leave out words giving the council of every borough and every county district " power to publish information, for the assistance of landlords and tenants, as to their rights and duties under the Acts, and as to the procedure for enforcing such rights of securing performance of such duties." He said that the publication of such information would entail additional and unnecessary expense, but that his real objection was that they were throwing on the local authorities what was really the business of the professional classes.

The Lord Chancellor said that all this provision in the Bill involved was that local authorities could publish information about the Rent Restriction Acts. Many of the difficulties attaching to the working of the present Acts were due to the inability of the people to understand the provisions of the law, which were of a very technical character. One effect of giving this information would be to do away with a great amount of legal proceedings. The local authorities were only to publish information of a general character, and were not to give advice in regard to individual cases. The cost of publishing this information would be trifling.

Lord Jessel suggested that the Ministry of Health should send a circular to the local authorities instructing them as to the kind of information which they should publish

The Lord Chancellor gave an assurance that this should be done.

The amendment was withdrawn.

Scottish Estimates

In the course of a debate on Scottish Estimates, Mr. Skelton, the Under-Secretary for Health, reviewed the year's housing progress in Scotland. He said that the number of houses completed was 15,818. Up to December 31, 1932, the number under construction, or for which definite contracts had been made was 30,777, the highest figure reached in Scotland since the Housing Act became law, and almost 4,000 higher than the previous record. The figure of slum houses completed by the end of 1932 was 19,699. In the following five months tenders had been approved for a larger number of slum clearance houses than had ever been approved in the corresponding period of any year. For that period of 1931 the tenders rose just above the 2,000 limit ; in 1932, they rose to 2,969 ; and for the first five months of this year the figure was 3,739. That showed that the local authorities were steadily increasing the number of slum clearance houses. But the task of slum clearance was not completed, and the Department would spare no efforts in this direction. With regard to the £3 subsidy houses, the Act had been in operation for just over a month, and there were already finally approved 104 £3 subsidy houses, applications were in for 668, and inquiries were coming in on a larger scale. The cost of houses was being constantly reduced. For all types of house in 1932 the average builder's cost was £300, and that had fallen in the first five months of this year to £285. With regard to the building society guarantee, 14 building corporations had been formed, involving the construction of approximately 4,000 houses. He was unable to say what proportion of these houses would be for letting purposes, but the formation of these 14 corporations showed the extent to which private enterprise had roused itself. With regard to town-planning, it was of importance that the city of Glasgow and its environs were now completely town-planned, and that the city of Aberdeen and the surrounding country to the extent of 96 square miles had got a most admirable town-planning scheme. In the case of Aberdeen, one of the results of the original scheme had been that the banks of the Dee, for eight miles inland from Aberdeen, were preserved for all time as a beauty spot.

Housing Progress

Mr. Mitcheson asked the Minister of Health if he could state the total number of houses built in the six months ended March 31, 1933, and, for comparison, the corresponding total for the six months ended March 31, 1932.

Sir Hilton Young said that the total number of houses of a rateable value not exceeding £78 (or £105 in the Metropolitan area) completed in England and Wales during the six months ended March 31, 1933, was 104,981. The corresponding total for the six months ended March 31, 1932, was 106,461.

Mr. T. Williams asked the Minister of Health if he would state how many local authorities had made application for permission to build houses during each of the five months this year; how many schemes were sanctioned; and how many houses were involved.

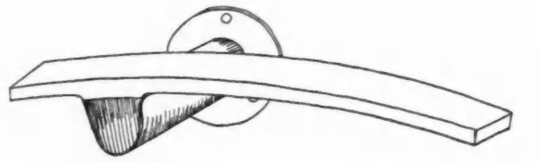
Sir Hilton Young said that specific answers could not be satisfactorily given to the three parts of the question, as decisions on many of the applications were still pending. The number of houses approved for erection by local authorities in England and Wales during each of the first five months of this year were 3,423; 4,001; 4,584; 2,515 and 3,304 respectively.

Smoke Abatement

"The Effects of Smoke and Fumes on Buildings" is the subject of an address to be given by Sir Frank Baines, C.B.E., F.R.I.B.A., at a meeting of the National Smoke Abatement Society at 71, Eccleston Square, S.W.1, on July 14, at 3.30 p.m.

A New Cardiff Road

The opening of the new orbital road, which will enable traffic to avoid going through the streets of Cardiff, will take place this month (writes our Welsh correspondent). There has been considerable local controversy about this by-pass road; but walking down it the other day, I was impressed with the new beauty spots opened out. The plan for the road was originally criticized on the ground that it menaced the seclusion of Llandaff Cathedral. Actually, the road will enable the public to see the cathedral standing at the end of the avenues of trees which were planted by the grandfather of the present Lord Bute, and which have now grown to maturity.



TRADE NOTES

BY F. R. S. YORKE, A.R.I.B.A.

British Industrial Art Exhibition

THE technical side of the British Industrial Art Exhibition is dealt with elsewhere in this issue. Nevertheless, there are one or two exhibits to which I particularly want to draw attention here, since they have some bearing on remarks I have made previously in these notes.

Door Handles

Some weeks ago I said "there are no decently designed standard lever handles, and the architect who wants a handle that looks as though it were designed for a door, and not for a sporting trophy, must design it himself, have it specially made, and pay a greater price for it than his client can reasonably be expected to afford," or words to that effect. I was mistaken. Among the Comyn Ching fittings, exhibited in the Main Hall, there is a very pleasing lever handle, of quite simple design, standardized for mass production. It is made of tungum alloy but can also be obtained in white metal and anodized aluminium, and, I believe, several other metals. The price of a pair of handles, with lock and escutcheon, is 30s.

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The Dryad Metal Works, also, have several admirable door and cupboard handles, of simple design, in plated metal. Considered as a whole, however, the door furniture section is significant of misdirected talent.

Unit Furniture

Isokon have standardized two new units: a horizontal cupboard and a horizontal shelf, and these are incorporated in the Isokon group fitted in the minimum flat, designed by Wells Coates.

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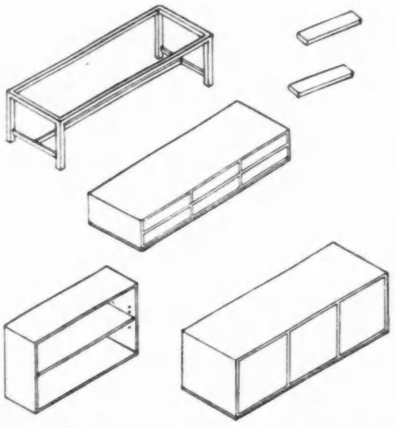
I have been asked by several readers for the address of Isokon. It is 12, Norfolk Street, Strand, London, W.C.2.

Since the original units were illustrated in these notes in the June 8 issue, the prices of some of the groups have, I was told at the exhibition, undergone slight revision. Here is a table showing the new prices:



The five basic units from which Plan furniture is built

Group 1—70s. 3d.
,, 2—34s. 2d. (no alteration).
,, 3—52s. 10d. (no alteration).
,, 4—58s. 4d.
,, 5—56s. 6d.
,, 6—64s. 4d.
,, 7—114s. 10d.

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The Week-end House, by Serge Chermayeff, is equipped with Plan furniture, which, like Isokon, provides units that are adaptable to personal needs, and from which groups may be composed to solve almost every furnishing problem.

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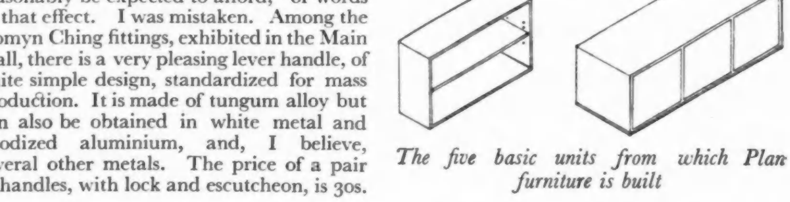
The design is based on five units: trestle, drawer, box, shelf, and link type; with additional wardrobe units.



Plan groups built from units similar to those shown above.

A Plan chair (registered design) with loose upholstery partly removed to show the patent band suspension.

Plan chairs, in a range comprising 18 models, some with wood and some with steel tube frames, are sprung on patent steel band suspension. The upholstery is easily removable, on the motor-car press-button principle, ensuring maximum convenience and hygiene.

Lighting Fittings

There is a notable advance in the design of electric lighting fittings. Whereas two or three years ago it was almost impossible to select an inexpensive fitting of good appearance from a range of standard types, and we were forced to buy from the Continent, we now find several British manufacturers have evolved or adopted excellent patterns for standardization. The Ultralux fittings exhibited by Troughton and Young are, in my opinion, as a range, outstanding.

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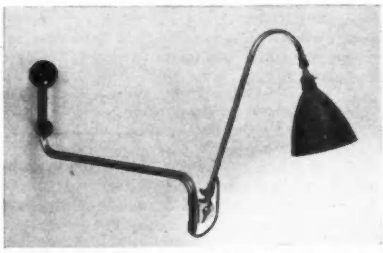
Best and Lloyd show, for the first time, an adaptation of the Bestlite as a bracket fitting, with a full extended arm projection of 3 ft. 3 ins. It is made from brass, heavily nickelled and chromium plated, and the shade and fixing flanges are sprayed with cellulose, in any desired colour. The price is 55s.



A new adaptation of Bestlite as a wall fitting, with a pivoted arm that enables the lamp to be moved into any position.

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The Merchant Adventurers show several Giso fittings, designed by Antoinette Boissevain, a pupil of W. H. Gispen, the Dutch architect and lighting expert.

The metal parts of Giso equipment are of copper, finished with either brown bronze, matt nickel or chromium plate. The glass is made to a special formula to produce a fine clear crystal covered by a thin layer of white opal, of just sufficient thickness to give complete diffusion with as little loss of light as possible through absorption. The thickness of the opal layer is proportionate to the intensity of light from the lamp for which the fitting is intended, and it is important to remember that if glare is to be avoided bulbs must not have a higher wattage than that for which the fitting is made. The wattage recommended is stated in every case against the size of the fitting in the manufacturer's catalogue.

Literature Received

Empire Standard Rainwater and Soil Goods	*Associated Builders' Merchants*
Helicon Floors	*The Helical Bar and Engineering Co.*

LAW REPORT

SEWERING AN ESTATE

South Strand Estate Development Co., Ltd., v. East Preston R.D.C.—Chancery Division. Before Mr. Justice Luxmoore

THIS was an action by the South Strand Estate Development Co., Ltd., against the East Preston R.D.C., for a declaration that the sewers or sewage works constructed by the company at Angmering-on-Sea, Sussex, were vested in the company and not in the East Preston R.D.C., now the Worthing R.D.C., and for an injunction restraining the Council from taking over the sewers without payment, for the purpose of their Angmering, East Preston and Rustington sewage disposal scheme.

The question, as to in whom the sewage works were vested, rested upon whether the plaintiff company was a separate entity carrying on business for profit of its shareholders, or whether, as the defendant council asserted, it was merely Mr. Wm. Hollis under another name, and that the sewers were laid as a necessary adjunct to the development of his building estate.

The material statement on which the question to be decided turned was the Public Health Act, 1875, section 13, which provides as follows :—" All existing and future sewers in the district of a local authority, together with all buildings, works materials, and things belonging thereto, except : (1) sewers made by any person for his own profit or by any company for the profit of the shareholders, (2) sewers made and used for the purpose of draining, preserving or improving land under any local or private Act of Parliament or for the purpose of irrigating land, and (3) sewers under the authority of any Commissioners of sewers appointed by the Crown, shall vest in and be under the control of such local authority."

Section 14 authorizes any local authority to purchase or otherwise acquire for any person any sewer or any right of making or other right in or respecting a sewer.

Mr. Swords, K.C., and Mr. R. Jennings appeared for the plaintiff company and Mr. J. Scholefield and Mr. Cook for defendants.

At the conclusion of the arguments Mr. Scholefield admitted that the plaintiff company was a separate legal entity, but he submitted that if the company laid down the sewers for a sanitary purpose in connection with the development of the building estate, they were in the same position as if Mr. Hollis himself had constructed the sewers, in which case they would be vested in the local authority.

His lordship remarked that what had been done might have been considered as a method of getting out of the Act and which was not contemplated by anybody except Mr. Hollis. The case raised a very important question.

Mr. Scholefield said that if the contention on behalf of the company was right, the result would lead to a hopeless state of affairs at Angmering.

His lordship said he was not concerned with that.

Continuing, Mr. Scholefield submitted that the line of pipes was laid for the sewering of Mr. Hollis's building estate and not for the profit of the company, and that when the pipes were used early in 1914 they became a sewer.

JUDGMENT

His lordship, in giving judgment, after stating the nature of the action and the relief which the plaintiff company sought, said that the question he had to decide depended upon the proper construction of section 13 of the Public Health Act, 1875, and whether the plaintiffs had brought themselves within one or the other of the exceptions to the section. Mr. Swords, on behalf of the plaintiffs, admitted that in order to succeed he must show that the case fell within the exceptions. Referring to the facts, his lordship said that in the year 1912 Mr. Hollis acquired the estate in question. There was then no common drainage system there or proper water supply system. Mr. Hollis wanted a proper system of drainage and a proper water supply, instead of cesspools, for drainage, and wells for the supply of water. He decided on the advice of his solicitor to form a company for that purpose, and accordingly the plaintiff company was formed in January, 1914.

On the evidence he had no hesitation in holding that the filter bed and tank were not completed and were not connected with the pipe line until after the formation of the plaintiff company in January, 1914, and that the pipe line was not used for disposal of sewage until after the formation of the company.

Proceeding, his lordship said there was a lease by the owner of the building estate to the company of the rights and privileges of making sewers on the land for the purpose of providing a drainage system. It was for the term of 99 years, the consideration paid by the company being £2,543 and an annual rent. The cost of connecting the sewer was debited to the company, and anyone wishing to use the sewer had to enter into an agreement with the company. The drainage rates had been collected by and credited to the company throughout. The question was, was the drainage scheme made for profit? Having regard to the evidence and authorities, he thought that the only possible answer to that question was in the affirmative. He had no hesitation in holding that the sewers and sewage works were constructed on behalf of the plaintiff company for profit, and that in the circumstances they were vested in the company for the term or lease and not in the defendant Council.

He granted a declaration as asked for by the company.

Mr. Swords said it was not necessary to grant the plaintiffs the injunction as the declaration would be sufficient.

A question arose as to whether the sewers were vested in Mr. Hollis, subject to the lease to the company, or in mortgagees, and his lordship said he was simply making a negative declaration that the sewers and works were not vested in the Council.

His lordship entered judgment accordingly and gave the general costs of the action to the plaintiff company.

SOCIETIES AND INSTITUTIONS

THE WELSH SCHOOL OF ARCHITECTURE

Exhibitions have recently been held at the Welsh School of Architecture, the Technical College, Cardiff.

The first of these, on June 14, consisted of designs and other work prepared by leading students exempted from the R.I.B.A. Intermediate and Final Examinations, and included the work of Mr. P. K. Pope, of the Bristol School, winner of the R.I.B.A. Bronze Medal, and that of Mr. Eric Mayorcas, winner of the R.I.B.A. Silver Medal.

The R.I.B.A. Exhibition of Architects' Working Drawings was shown on June 19. The working drawings exhibited included those made for the following buildings : New premises for the Royal Corinthian Yacht Club, Burnham-on-Crouch (Joseph Emberton, F.R.I.B.A.) ; St. Margaret's House, Wells Street, W.1. (Messrs. Richardson and Gill, FF.R.I.B.A.) ; a small public-house and the Swansea Civic Centre (Messrs. Ivor Jones and Percy Thomas, FF.R.I.B.A.).

MANCHESTER SOCIETY OF ARCHITECTS

The first of this year's Manchester Society of Architects' summer visits to places of architectural interest, was made on Saturday, June 24, to Liverpool, when the Corporation flats and housing schemes, and two suburban churches, were inspected.

Mr. L. H. Keay, F.R.I.B.A., the Director of Housing, had arranged a most interesting itinerary for the party, which included a visit to the most modern blocks of flats, now in process of building, and a tour through the Pinehurst, Norris Green, Highfield and Dovecot Estates. The visitors then went on to a newly-completed block of 260 flats at Speke Hill, Garston.

In the course of the tour the churches of St. Columba and St. Christopher, by Mr. B. A. Millar, A.R.I.B.A., were also visited.

SOUTH-EASTERN SOCIETY OF ARCHITECTS

At the annual general meeting of the South-Eastern Society of Architects, held at the R.I.B.A. last week, the following officers were elected for the ensuing year :—President : Mr. John Little, F.R.I.B.A. ; vice-presidents : Messrs. J. Saxon Snell, F.R.I.B.A., H. Anderson, F.R.I.B.A., F. W. Rees, L.R.I.B.A., T. R. Clemence, F.R.I.B.A., and W. H. Robinson, F.R.I.B.A. ; hon. general treasurer : Mr. Cecil Burns ; hon. editor : Mr. G. Maxwell Aylwin, F.R.I.B.A. ; hon. auditor : Mr. John L. Denman, F.R.I.B.A. ; hon. general secretary : Mr. K. Goulburn Lovell, A.R.I.B.A.

RURAL DISTRICTS HOUSING ASSOCIATIONS

Slum clearance and reconditioning was discussed by the Minister of Health at the annual meeting of the Rural Districts Housing Associations, held at the Guildhall, London, last week.

He said they could not, of course, put right in a year what had taken many years to go wrong. But what they could do was this : now, in the course of the next six months, to review the situation and to make a programme, at once prompt and practical, by following which the evil could be remedied within the named period of five years. He was quite aware that some thought five years too short a time. He believed that, given confidence and determination, both on the part of the local authorities and the Government, the thing could be done.

OUR SECRETARIES

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JOHN CHALLICE

DEVON AND CORNWALL ARCHITECTURAL SOCIETY

MR. JOHN CHALLICE, A.R.I.B.A., P.A.S.I., was born in 1894, and received his early architectural training in Exeter. He completed his articles in the latter part of 1914. During the war he served with the British forces in Mesopotamia and India, first in the infantry and subsequently in the Indian Military Works Department.

On his return from the war he completed his architectural training in London, in the offices of Mr. Sydney Tatchell, F.R.I.B.A., and in the Atelier of the Society of Architects ; in 1922 he became an Associate of the R.I.B.A.

Mr. Challice later entered into partnership with his father in Exeter, and has since been responsible for ecclesiastical, hospital and bank work, schools, public halls, factories, warehouses, shops, estate development and domestic buildings.

He has been Secretary of the Devon and Cornwall Architectural Society for the past ten years, and also edits their Journal of Proceedings.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Archbishop Davidson Institute, Lambeth, S.E., (pages 10-11). General contractors, F. and H. F. Higgs, Ltd.; consulting engineer, J. S. Wilson; advisers on stage lighting and equipment, Ridge and Aldred ; adviser on acoustics, H. Bagenal. Sub-contractors : Matthew T. Shaw & Co., Ltd., structural steelwork ; Kleine Co., Ltd., patent floors ; T. S. Knight and Son, Ltd., heating and hot water ; Grierson, Ltd., electric wiring and ventilation ; Crittall Manufacturing Co., Ltd., steel windows ; Comyn Ching & Co., Ltd., wrought metal work ; Robert Adams, ironmongery ; Speirs & Co., sanitary fittings ; Ragusa Asphalte Paving Co., Ltd., asphalt ; Christiani and Nielsen, Ltd., acoustic materials, floors ; Tentest Fibre Board Co., Ltd., acoustic materials, walls ; Pixtons, Ltd., stage equipment.

Mary Stevens Maternity Home, Stourbridge (pages 20-21 and supplement). General contractors, T. W. Edwards and Sons. Sub-contractors : W. Hampton, electrical installation ; Brightside Foundry & Engineering Co., Ltd., heating and hot water installation ; Birmingham Guild, Ltd., entrance gate ; James Slater & Co. (Engineers) Ltd., sterilizers ; Thos. Bradford & Co., laundry machinery ; Diespeker & Co., Ltd., terrazzo ; George Prince, Ltd., plastering ; Doulton & Co., Ltd., sanitary fittings ; Kleine Co., Ltd., fireproof flooring ; Henry Hope and Sons, Ltd., steel casements ; Thresh Disinfector Co., disinfectors.

Changes of Address

Mr. Verner O. Rees, F.R.I.B.A., chartered architect, has removed his offices to 16 Harpur Street, W.C.1. Telephone No. : Holborn 9631.

Mr. Stephen H. Clarke, Architect and Surveyor, has removed his offices to 108 Borough Road, Middlesbrough.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

The ACTON Corporation is to prepare plans for the erection of 26 houses, and three blocks of 12 flats, in Canada Road.

Plans passed by the ACTON Corporation: Four shops and houses, Willesden Lane, for Messrs. Davis and Knight; factory extension, for Messrs. Griener and Son, off Chase Road, for Mr. F. E. Simpkins; canteen and pavilion, Western Avenue, for Messrs. Wallis, Gilbert and Partners; alterations, Vi-spring factory, Victoria Road, for Mr. A. A. H. Scott; alterations for United Dairies, Ltd., Western Avenue, for Mr. F. Dear; works extensions, for Messrs. G. Phillips and Son, Ltd., for Mr. R. H. Radburn; alterations, Royal Insurance Co., Western Avenue, for Mr. F. R. Fisher.

The BATTERSEA B.C. is considering the provision of filtration plant at the Latchmere Road Baths, which the borough engineer reports will cost about £10,000. Meanwhile the engineer is to prepare detailed plans, and also plans for deepening and retiling the large bath.

The L.C.C. is to enlarge the Maudesley mental hospital, CAMBERWELL, at a cost of £47,634.

Plans passed by the COULSDON U.D.C.: Two houses, Winifred Road, for Mr. H. J. Salter; two houses, Richmond Road, for Mr. T. A. Parker; six houses, St. Andrew's Road, for Mr. E. H. N. Bate; two houses, St. Andrew's Road, for Mr. H. Hemmings; post office, Chipstead Valley Road, for H.M. Office of Works; tennis pavilion, Pondfield Road, Kenley, for Mr. L. E. Williams; six houses, St. Andrew's Road, for Messrs. C. F. Smith & Co.

Plans passed by the DARTFORD U.D.C.: Seven houses, Baldwyns Road, for Mr. J. Cameron; two houses, Knole Road, for Mr. R. J. Clifford; workshop, Princes Road, for Messrs. B. S. Gelston & Co., Ltd.; 12 houses, Shepherds Lane and Princes Road, for Messrs. Holroyd and Gilham, Ltd.; 26 houses, Collingwood Close, for Mr. W. G. Cooper; new offices, Dartford police station, for Mr. W. H. Robinson; four houses, Princes Road, for Mr. G. H. Giles; three houses, Knole Road, for Messrs. H. C. Wright & Co., Ltd.

Plans passed by the EALING Corporation: Twenty-one houses, Clauson Avenue, for Hayes Bridge Estate, Ltd.; eight houses, Rydal Crescent, for Mr. F. Roberts; three houses, Cleveland Road, for Messrs. P. Chase, Gardener & Co.; 22 houses, Rydal Crescent, for Messrs. R. Lancaster and Sons; nine houses, Westvale Terrace, for Messrs. R. Fielding and Son; nine houses, Cavendish Avenue, for Messrs. G. K. Metcalfe, Ltd.; four houses, Greenford Gardens, for Mr. M. Terrey; two houses, Cantley Road, for Mr. J. M. Wilson; two houses, and four flats, Cuckoo Dene, for Mr. R. J. Ward; block of flats, Hastings Road, for Housing Corporation of Great Britain, Ltd.; 14 houses, Federal Road, for Messrs. W. Smirk and Sons; 29 houses, Perimeade Road, for Mr. G. L. Russell; 10 shops, and 40 offices, The Broadway, for Mr. T. Brammall Daniel; 12 houses, Bennetts Avenue, for Mr. A. V. Stubbs; five shops, and flats, Greenford Road, for Messrs. Marrable Bros.; six houses, Clauson Avenue, for Messrs. Westwell and Pollitt; four flats, Castlebar Park, for Mr. G. Whittaker; three houses, Popes Lane, for Messrs. J. Atherton & Co.; café, Bideford Avenue, for Mr. R. C. Sims; shop and showroom, The Broadway, for Messrs. Dixon and Braddock; additions, Brent Foundry, Studley Grange Road, for Messrs. Thomas and Thomas; flats, North Common Road, for Mr. D. G. Waring.

The L.C.C. is to erect an elementary school for 1,000 children on the Honor Oak housing estate, LEWISHAM.

SOUTHERN COUNTIES

Plans passed by the FARNHAM U.D.C.: Two houses, Avon Road, for Mr. G. W. Baigent; four houses, Heath End, for Messrs. Crosby & Co., Ltd.; alterations, Marlborough Head public-house, for Mr. J. H. Howard; two houses, Fox Yard, for Mr. H. Butt.

Plans passed by the PORTSMOUTH Corporation: Five houses, Kirby Road, for Messrs. Howe and Bishop; 12 garages, Northern Parade, for Mr. E. A. Wright; two bungalows, Lower South Road, for Messrs. Cortis and Hamkins; six houses, Bernard Avenue, for Mr. H. E. Collins; four houses, Copnor Road, for Mr. G. Wallis; hall, Tangier Road, for Rev. P. J. McSwiney; two houses, Westfield Road, for Mr. A. Weeks; two flats, Tangier Road, for Mr. C. R. Attwell; three houses, Clifton Street, for Mr. I. Fogelman; alterations and additions, 111-3, Albert Road, for Messrs. Timothy White, Ltd.; 18 houses, Beechwood Road, for Mr. R. J. Winnicott; 10 houses, Amberley Road, for Mr. V. Dye; six houses, Copnor Road, for Messrs. Williams Bros.; eight houses, Eveleigh Road, for Messrs. G. McCormick and Son; dairy, Albert Road, for Mr. F. Miles.

SOUTH-WESTERN COUNTIES

Plans passed by the PAIGNTON U.D.C.: Additions, Goodrington House Hotel, Tanners Road, for Addison Café Co.; works, Crabbs Park, Brixham Road, for Messrs. H. and G. Simonds, Ltd.; estate lay-out, off Preston Down Road, for Great Western Building Corporation; shop, Totnes Road, for Mr. R. A. Mattacott; two houses, Knapp Park Road, for Mr. E. H. Ladbury; additions, Croft Hotel, Hyde Road, for Mr. R. C. Farmer; two houses, Winner Hill Road, for Mr. D. Peeke; six flats, Manor Road, for Mr. W. Pearcey; 15 garages, Wilbarn Avenue, for Messrs. Willcocks and Barnes; four houses, Redburn Road, for Mr. A. Chippendale; 16 houses, All Hallows Road, for Mr. H. Proctor.

MIDLAND COUNTIES

The CHESTERFIELD Corporation has arranged to erect 134 houses, for the accommodation of tenants displaced from slum-cleared areas.

Plans passed by the CHESTERFIELD Corporation: Two houses, Walton Road, for Mr. H. Hollis; two houses, Walton Road, for Mr. L. W. Crossley; two houses, Baden Powell Road, for Messrs. Clarke Bros.; two bungalows, Prospect Road, for Mrs. A. Harrison; two houses, Storforth Lane, and shop and house, Derby Road, for Mr. R. C. Longmore; alterations to premises, Packers Lane, for Messrs. E. Woodhead and Sons, Ltd.; five houses, Malvern Road, for Mr. A. Heath; two houses, Highfield Avenue, for Mr. A. Needham; two houses, Mansfield Road, for Mr. S. Wells; two bungalows, Langer Lane, for Messrs. Ervine & Co.; two bungalows, Chatsworth Avenue, for Mrs. Simmonds; estate lay-out, Birdholme, for Mr. F. Mower; two houses, Gladstone Road, for Mr. H. Mellor; two houses, Highfield Avenue, for Mr. F. W. Dutton; four houses, off St. Thomas Street, for Messrs. W. Rhodes and Sons; two houses, Sydney Street, for Mr. F. Longden.

NORTHERN COUNTIES

Plans passed by the BLACKPOOL Corporation: Shops, house, and workshop, Anchorsholme Lane, for Mr. T. Fenton; four houses, the Promenade, for Messrs. Parkinson & Co., Ltd.; two houses, Beechfield Avenue, for Mr. J. Reid; four houses, Central Drive, for Messrs. C. Morrison and Son; two houses, Park Drive, for Mr. H. Suthers; hospital, Whinney Lane, for Victoria Hospital trustees; four houses, Anchorsholme Lane, for Mr. A. A. Holt; 10 houses, Anchorsholme Lane, for Messrs. R. and H. Fletcher; streets and sewers, Torsway Avenue, for Newton Park Estate Co.; alterations, Coliseum, Tyldesley Road, for Messrs. Horsfall, Salthouse & Co.; four houses, Delphine Avenue, for Mr. W. Spencer; 25 houses, Lyddesdale Avenue, and 12 houses, Valewood Avenue, for Messrs. Chadwick & Co.; house and shop, Norbreck Road, for Mr. R. Dickinson; four houses, Devonshire Road, for Messrs. R. Fielding and Son; two houses, Warbreck Drive, for Messrs. P. and D. Slater; 11 houses, and house and shop, Devonshire Road, for Messrs. Potts and Dugdale; two houses, Squires Gate Lane, for Mr. J. H. Armstrong; two houses and shops, Fleetwood Road, for Mr. H. B. Pownall; eight houses, Alderney Avenue, for Mr. J. Foster; five houses, Bloomfield Road, for Messrs. J. and W. Omeroid; two houses, Park Road, for Mr. J. Gregson; four houses, Delaware Road, for Mr. R. Miller; 11 houses, Bloomfield Road, for Mr. S. A. Howard.

WALES

Plans passed at SWANSEA: Dairy, Neath Road, Plasmarl, for Mr. W. Williams; two houses, Middle Road, for Mr. J. Jewell; two houses, Vicarage Road, for Messrs. S. Crook and W. Jenkin; two houses, Penvillia Road, for Mr. R. Wheeler; addition, 27, Crown Street, for Mr. T. J. Harry; three houses, Morfydd Street, for Mr. D. Thomas; six flats, Glanmor Crescent, for Estateways, Ltd.; two houses, Gower Road, for Mr. A. J. Bevan; two houses, Lon Coed Bran, for Mr. Dan Griffiths; two houses, Station Road, Cockett, for Mr. Syd. Davies; warehouse and showrooms, 38, Craddock Street, for Messrs. Wallace and Wait, Ltd.; three houses, Bedford Street, for Messrs. Walters and Johns; additions and alterations, Llwyn-y-bryn High School for Girls, Brynmor Crescent, for the Education Committee; workshop and store, 156, Carmarthen Road, Cwmdu, for Mr. Mathew D. Clement; two houses, Mumbles Road, West Cross, for Mr. T. H. Harris; two houses, Gower Road, for Mr. I. J. Aubrey.

SCOTLAND

The GLASGOW Education Committee is to extend St. John's Girls' School, Tradeston Street, at a cost of £7,550.

A pair of houses in East Yorkshire. [*From* THE ADVENTURE OF BUILDING, *reviewed on page 22.*]

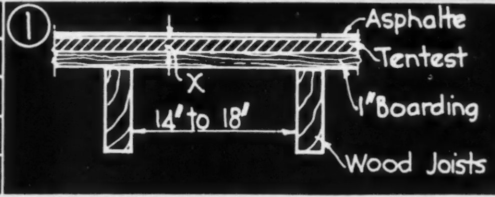
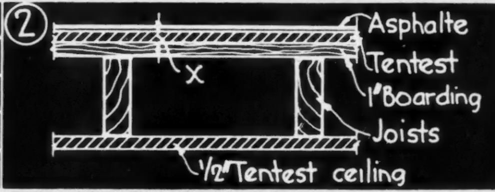
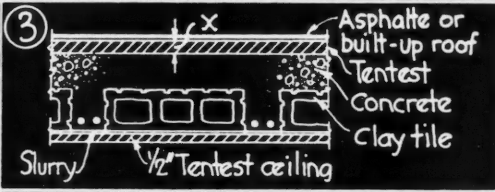
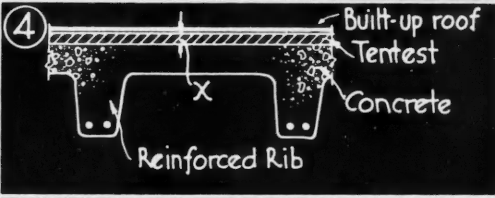
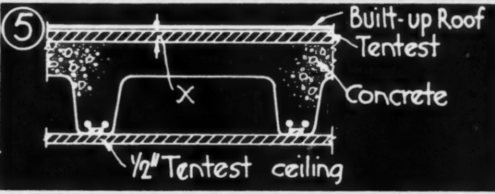
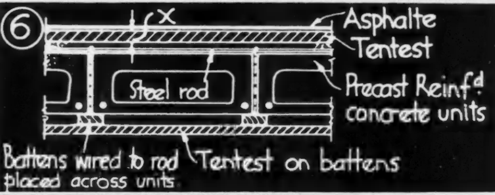
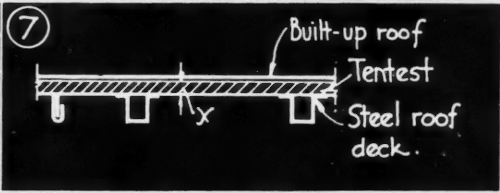
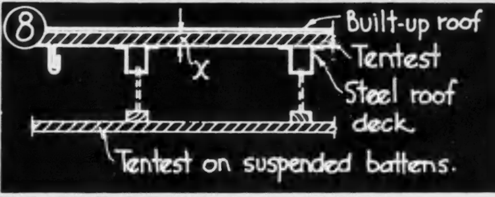
RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen ; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE ..	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny ..	S. Wales & M.	1 5	1 0¾
A_3	Abingdon ..	S. Counties	1 4	1 0
A	Accrington ..	N.W. Counties	1 5½	1 1¼
A_3	Addlestone ..	S. Counties	1 4	1 0
A	Adlington ..	N.W. Counties	1 5½	1 1¼
A	Airdrie ..	Scotland	*1 5½	1 1¼
C	Aldeburgh ..	E. Counties	1 1½	10¼
A	Altrincham ..	N.W. Counties	1 5½	1 1¼
B_3	Appleby ..	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone ..	Mid. Counties	1 4	1 0
B_2	Aylesbury ..	S. Counties	1 2½	11
B_1	BANBURY ..	S. Counties	1 3	11¼
B_1	Bangor ..	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley ..	Yorkshire	1 5½	1 1¼
B	Barnstaple ..	S.W. Counties	1 3½	11¾
A	Barrow ..	N.W. Counties	1 5½	1 1¼
A	Barry ..	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke ..	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley ..	Yorkshire	1 5½	1 1¼
A_3	Bedford ..	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley ..	Mid Counties	1 4½	1 0½
B	Bicester ..	S. Counties	1 2	10½
	Birkenhead ..	N.W. Counties	*1 7	1 2¼
A	Birmingham ..	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn ..	N.W. Counties	1 5½	1 1¼
A	Blackpool ..	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor ..	S. Counties	1 2½	11
A	Bolton ..	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth ..	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford ..	Yorkshire	1 5½	1 1¼
A_1	Brentwood ..	E. Counties	1 5	1 0¾
A	Bridgend ..	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater ..	S.W. Counties	1 3	11¼
A_1	Bridlington ..	Yorkshire	1 5	1 0¾
A	Brighouse ..	Yorkshire	1 5½	1 1¼
A_3	Brighton ..	S. Counties	1 4	1 0
A	Bristol ..	S.W. Counties	1 5	1 0¾
B_3	Brixham ..	S.W. Counties	1 2	10½
A_2	Bromsgrove ..	Mid. Counties	1 4½	1 0½
C	Bromyard ..	Mid. Counties	1 1½	10¼
A	Burnley ..	N.W. Counties	1 5½	1 1¼
A	Burslem ..	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton ..	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE ..	E. Counties	1 4½	1 0½
B_2	Canterbury ..	S. Counties	1 2½	11
A	Cardiff ..	S. Wales & M.	1 5½	1 1¼
A	Carlisle ..	N.W. Counties	1 5½	1 1¼
B	Carmarthen ..	S. Wales & M.	1 3½	11¾
B	Carnarvon ..	N.W. Counties	1 3½	11¾
A	Carnforth ..	N.W. Counties	1 5½	1 1¼
A	Castleford ..	Yorkshire	1 5½	1 1¼
B	Chatham ..	S. Counties	1 3½	11¾
B	Chelmsford ..	E. Counties	1 3½	11¾
A_3	Cheltenham ..	S.W. Counties	1 4	1 0
A	Chester ..	N.W. Counties	1 5½	1 1¼
A	Chesterfield ..	Mid. Counties	1 5½	1 1¼
B_2	Chichester ..	S Counties	1 2½	11
A	Chorley ..	N.W. Counties	1 5½	1 1¼
B_2	Cirencester ..	S. Counties	1 2½	11
A	Clitheroe ..	N.W. Counties	1 5½	1 1¼
A	Clydebank ..	Scotland	1 5½	1 1¼
A	Coalville ..	Mid. Counties	1 5½	1 1¼
A_3	Colchester ..	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett ..	N.E. Coast	1 5	1 0¾
A_2	Conway ..	N.W. Counties	1 4½	1 0½
A	Coventry ..	Mid. Counties	1 5½	1 1¼
A_2	Crewe ..	N.W. Counties	1 4½	1 0½
A	Cumberland ..	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen ..	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh ..	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury ..	Yorkshire	1 5½	1 1¼
B	Didcot ..	S. Counties	1 3½	11¾
A	Doncaster ..	Yorkshire	1 5½	1 1¼
B_2	Dorchester ..	S.W. Counties	1 2½	11
A_3	Driffield ..	Yorkshire	1 4	1 0
A_2	Droitwich ..	Mid. Counties	1 4½	1 0½
A	Dudley ..	Mid. Counties	1 5½	1 1¼
A	Dundee ..	Scotland	1 5½	1 1¼
A	Durham ..	N.E. Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale ..	S. Wales & M.	1 5	1 0¾
A	Edinburgh ..	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter ..	S.W. Counties	*1 4½	1 0½
B_1	Exmouth ..	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood ..	N.W. Counties	1 5½	1 1¼
B_2	Folkestone ..	S. Counties	1 2½	11
A	Frodsham ..	N.W. Counties	1 5½	1 1¼
B_2	Frome ..	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham ..	S. Counties	1 3½	11¾
A_2	Gloucester ..	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport ..	S. Counties	1 4	1 0
A_3	Grantham ..	Mid. Counties	1 4	1 0
A_1	Gravesend ..	S. Counties	1 5	1 0¾
A	Greenock ..	Scotland	*1 5½	1 1¼
A	Grimsby ..	Yorkshire	1 5½	1 1¼
B_1	Guildford ..	S. Counties	1 3	11¼
A	HALIFAX ..	Yorkshire	1 5½	1 1¼
A	Hanley ..	Mid. Counties	1 5½	1 1¼
A	Harrogate ..	Yorkshire	1 5½	1 1¼
A	Hartlepools ..	N.E. Coast	1 5½	1 1¼
B	Harwich ..	E. Counties	1 3½	11¾
B_2	Hastings ..	S. Counties	1 2½	11
A_3	Hatfield ..	S. Counties	1 4	1 0
B	Hereford ..	S.W. Counties	1 3½	11¾
A_3	Hertford ..	E. Counties	1 4	1 0
A	Heysham ..	N.W. Counties	1 5½	1 1¼
A	Howden ..	N.E. Coast	1 5½	1 1¼
A	Huddersfield ..	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY ..	Yorkshire	1 5½	1 1¼
A	Immingham ..	Mid. Counties	1 5½	1 1¼
A_3	Ipswich ..	E. Counties	1 4	1 0
B_3	Isle of Wight ..	S. Counties	1 2	10½
A	JARROW ..	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY ..	Yorkshire	1 5½	1 1¼
B	Kendal ..	N.W. Counties	1 3½	11¾
B	Keswick ..	N.W. Counties	1 3½	11¾
A_2	Kettering ..	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn ..	E. Counties	1 2½	11
A	LANCASTER ..	N.W. Counties	1 5½	1 1¼
A_1	Leamington ..	Mid. Counties	1 5	1 0¾
A	Leeds ..	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester ..	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield ..	Mid. Counties	1 4½	1 0½
A	Lincoln ..	Mid. Counties	1 5½	1 1¼
	Liverpool ..	N.W. Counties	*1 7	1 2¼
A_2	Llandudno ..	N.W. Counties	1 4½	1 0½
A	Llanelly ..	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton ..	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham ..	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W. Counties	1 5	1 0¾
B	Maidstone ..	S. Counties	1 3½	11¾
A_3	Malvern ..	Mid. Counties	1 4	1 0
A	Manchester ..	N.W. Counties	1 5½	1 1¼
A	Mansfield ..	Mid. Counties	1 5½	1 1¼
B_1	Margate ..	S. Counties	1 3	11¼
A_3	Matlock ..	Mid. Counties	1 4	1 0
A_1	Merthyr ..	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich ..	N.W. Counties	1 4½	1 0½
B_2	Minehead ..	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe ..	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH ..	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson ..	N.W. Counties	1 5½	1 1¼
A	Newcastle ..	N.E. Coast	1 5½	1 1¼
A	Newport ..	S. Wales & M.	1 5½	1 1¼
A	Normanton ..	Yorkshire	1 5½	1 1¼
A_1	Northampton ..	Mid. Counties	1 5	1 0¾
A	North Staffs. ..	Mid. Counties	1 5½	1 1¼
A	North Shields ..	N.E. Coast	1 5½	1 1¼
A_2	Norwich ..	E. Counties	1 4½	1 0½
A	Nottingham ..	Mid. Counties	1 5½	1 1¼
A	Nuneaton ..	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM ..	Mid. Counties	1 4	1 0
A	Oldham ..	N.W. Counties	1 5½	1 1¼
A_3	Oswestry ..	N.W. Counties	1 4	1 0
A_2	Oxford ..	S. Counties	1 4½	1 0½
A	PAISLEY ..	Scotland	*1 5½	1 1¼
B_3	Pembroke ..	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth ..	S.W. Counties	*1 5½	1 1¼
A	Pontefract ..	Yorkshire	1 5½	1 1¼
A_1	Pontypridd ..	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth ..	S. Counties	1 4	1 0
A	Preston ..	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING ..	S. Counties	1 4½	1 0½
B	Reigate ..	S. Counties	1 3½	11¾
A_3	Retford ..	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale ..	N.W. Counties	1 5½	1 1¼
B	Rochester ..	S. Counties	1 3½	11¾
A_1	Ruabon ..	N.W. Counties	1 5	1 0¾
A	Rugby ..	Mid. Counties	1 5½	1 1¼
A_3	Rugeley ..	Mid. Counties	1 4	1 0
A	Runcorn ..	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS ..	E. Counties	1 4½	1 0½
A	St. Helens ..	N.W. Counties	1 5½	1 1¼
B_3	Salisbury ..	S.W. Counties	1 2	10½
A_1	Scarborough ..	Yorkshire	1 5	1 0¾
A	Scunthorpe ..	Mid. Counties	1 5½	1 1¼
A	Sheffield ..	Yorkshire	1 5½	1 1¼
A	Shipley ..	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury ..	Mid. Counties	1 4½	1 0½
A_2	Skipton ..	Yorkshire	1 4½	1 0½
A_3	Slough ..	S. Counties	1 4	1 0
A_2	Solihull ..	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport ..	N.W. Counties	1 5½	1 1¼
A	S. Shields ..	N.E. Coast	1 5½	1 1¼
A_2	Stafford ..	Mid. Counties	1 4½	1 0½
A	Stockport ..	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud ..	S.W. Counties	1 3½	11¾
A	Sunderland ..	N.E. Coast	1 5½	1 1¼
A	Swadlincote ..	Mid. Counties	1 5½	1 1¼
A	Swansea ..	S. Wales & M.	1 5½	1 1¼
A_3	Swindon ..	S.W. Counties	1 4	1 0
A_1	TAMWORTH ..	N.W. Counties	1 5	1 0¾
B	Taunton ..	S.W. Counties	1 3½	11¾
A	Teesside Dist...	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth ..	S.W. Coast	1 4	1 0
A	Todmorden ..	Yorkshire	1 5½	1 1¼
A_1	Torquay ..	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall ..	Mid. Counties	1 5½	1 1¼
A	Tyne District ...	N. E. Coast	1 5½	1 1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall ..	Mid. Counties	1 5½	1 1¼
A	Warrington ..	N.W. Counties	1 5½	1 1¼
A_1	Warwick ..	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby ..	Yorkshire	1 4½	1 0½
A	Widnes ..	N.W. Counties	1 5½	1 1¼
A	Wigan ..	N.W. Counties	1 5½	1 1¼
B_1	Winchester ..	S. Counties	1 3	11¼
A_3	Windsor ..	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester ..	Mid. Counties	1 4½	1 0½
A	Worksop ..	Yorkshire	1 4	1 0
A_1	Wrexham ..	N.W. Counties	1 5	1 0¾
A_3	Wycombe ..	S. Counties	1 4	1 0
B_1	YARMOUTH ..	E. Counties	1 3	11¼
B_1	Yeovil ..	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

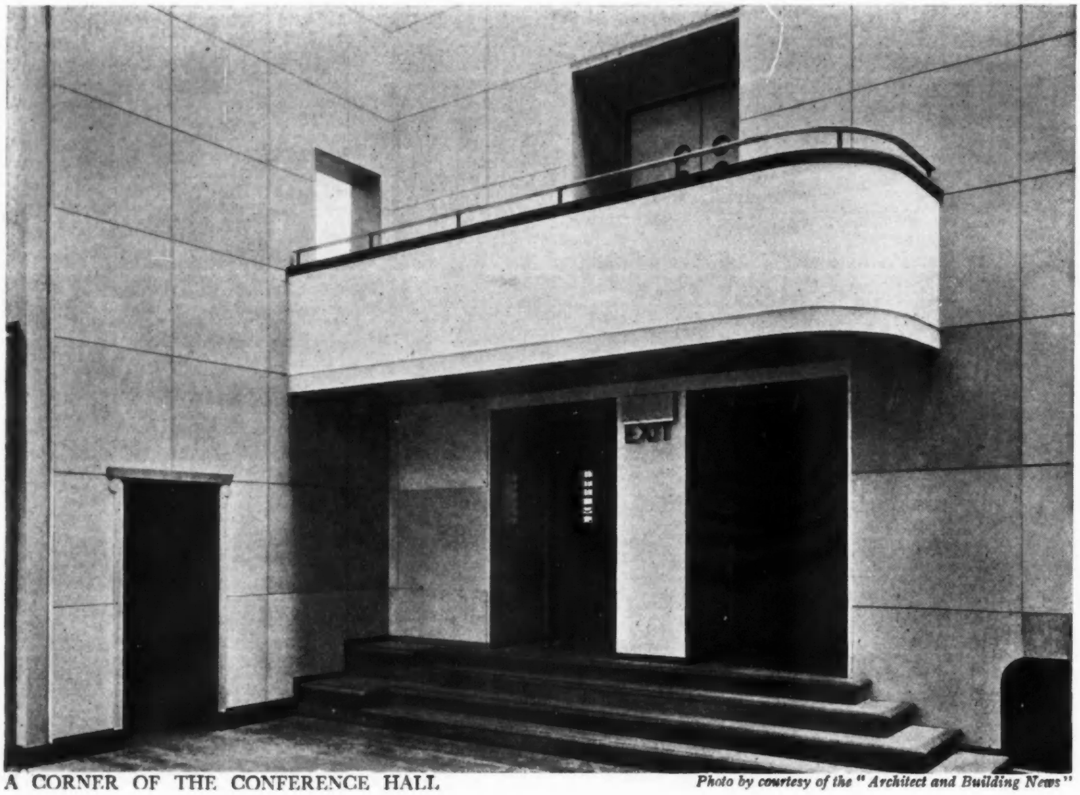
The rates for every trade in any given area will be sent on request.

THICKNESS OF **TENTEST** X IN INCHES	COEFFICIENT OF TRANSMISSION IN B.T.U.s PER HOUR PER °F PER SQ.FT.	ANNUAL COAL FUEL SAVING IN TONS/1000 SQ. FEET OF INSULATION	ROOF CONSTRUCTION
None	0·485	–	①  Asphalte Tentest X 14" to 18" 1" Boarding Wood Joists
½	0·280	3·47	
⅝	0·253	3·92	
¾	0·216	4·55	
1	0·196	4·88	
Ceiling only	0·219	–	②  Asphalte Tentest X 1" Boarding Joists ½" Tentest ceiling
½	0·164	0·93	
⅝	0·155	1·08	
¾	0·146	1·23	
1	0·131	1·49	
Ceiling only	0·197	–	③  X Asphalte or built-up roof Tentest Concrete Clay tile Slurry ½" Tentest ceiling
½	0·152	0·76	
⅝	0·144	0·90	
¾	0·136	1·03	
1	0·124	1·23	
None	0·568	–	④  Built-up roof Tentest X Concrete Reinforced Rib
½	0·306	4·42	
⅝	0·274	4·95	
¾	0·248	5·42	
1	0·209	6·06	
Ceiling only	0·233	–	⑤  Built-up Roof Tentest X Concrete ½" Tentest ceiling
½	0·172	1·03	
⅝	0·162	1·20	
¾	0·153	1·35	
1	0·137	1·62	
Ceiling only	0·243	–	⑥  X Asphalte Tentest Steel rod Precast Reinfd. concrete units Battens wired to rod placed across units Tentest on battens
½	0·178	1·10	
⅝	0·167	1·28	
¾	0·157	1·45	
1	0·141	1·72	
None	0·781	–	⑦  Built-up roof Tentest X Steel roof deck.
½	0·358	7·20	
⅝	0·315	7·90	
¾	0·282	8·42	
1	0·232	9·29	
Ceiling only	0·262	–	⑧  Built-up roof Tentest X Steel roof deck Tentest on suspended battens.
½	0·188	1·25	
⅝	0·177	1·44	
¾	0·166	1·62	
1	0·146	1·96	

Note. The fuel savings are based on a heating period of 210 days with a difference between inside and outside temperatures of 35°F.

TECHNICAL DATA SHEET 1. (Copyright) ROOFS.

The Tentest Fibre Board Co. (1929) Ltd. — — Astor House. W.C.2.



A CORNER OF THE CONFERENCE HALL

Photo by courtesy of the "Architect and Building News"

SHAKESPEARE MEMORIAL THEATRE
STRATFORD-ON-AVON

Architects:
Scott, Chesterton & Shepherd,
F.AA.R.I.B.A

Contractors:
G. E. Wallis & Sons, Ltd.

TENTEST was applied to the whole of the main walls and ceiling of the Conference Hall in order to ensure satisfactory acoustics. TENTEST sheets of standard size were employed on the ceiling, no joint strip being used, finished with coloured decoration. Specially cut and bevelled TENTEST panels were applied to the walls. The panels were left undecorated, their colour and texture presenting a most pleasing effect.

Please write for particulars

THE TENTEST
FIBRE BOARD
CO. (1929) LTD
Holborn 8018, 8019.

Deadens noise.
Prevents condensation.

TENTEST
TRADE MARK
An Empire Product.

Resists damp.
Speeds up construction.

ASTOR HOUSE
ALDWYCH
LONDON, W.C.2.
Fiboard, Estrand, London.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	„		1	7
Joiner	„		1	7
Machinist	„		1	8
Mason (Banker)	„		1	7
„ (Fixer)	„		1	8
Plumber	„		1	7
Painter	„		1	6
Paperhanger	„		1	6
Glazier	„		1	7
Slater	„		1	7
Scaffolder	„		1	3
Timberman	„		1	3
Navvy	„		1	2½
General Labourer	„		1	2½
Lorryman	„		1	5
Crane Driver	„		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	„	1	16	6
Hydrated Lime	„	3	0	9
Portland Cement	„	2	6	0
Rapid Hardening Cement	„	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	„		7	6
Building Sand	„		7	9
Washed Sand	„		8	9
2" Broken Brick	„		8	3
¾" „ „	„		11	6
Pan Breeze	„		6	6
Coke Breeze	„		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	„	3	6	5	3
Rest bends	„	4	3	6	3
Single junctions	„	3	6	5	3
Double „	„	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	„	4	6	6	6
Channel tapers	„	2	9	4	0
Yard gullies	„	6	9	8	9
Interceptors	„	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	„	9	0	15	0
Single junctions	„	8	9	18	0
Double junctions	„	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	„		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	„	3	0	0
Phorpres bricks	„	2	18	0
Stocks, 1st quality	„	4	11	0
„ 2nd „	„	4	2	6
Blue Bricks, Pressed	„	9	2	6
„ Wirecuts	„	8	2	6
„ Brindles	„	7	6	6
„ Bullnose	„	9	14	0
Red Sand-faced Facings	„	6	18	6
Red Rubbers for Arches	„	12	0	0
Multicoloured Facings	„	8	8	0
Luton Facings	„	8	0	0
Phorpres White Facings	„	3	17	3
Phorpres Rustic Facings	„	3	12	3
Midhurst White Facings	„	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	„	21	10	0
Headers	„	21	0	0
Bullnose	„	28	0	0
Double Stretchers	„	30	0	0
Double Headers	„	27	0	0
Glazed Second Quality, *Less*	„	1	0	0
„ Buffs and Creams, *Add*	„	2	0	0
„ Other Colours	„	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" „ „ „	„		1	10
3" „ „ „	„		2	1
4" „ „ „	„		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
„ „ Basebed	„	4	9
Bath stone	„	2	11
York stone	„	6	6
„ „ Sawn templates	„	7	6
„ „ Paving, 2"	F.S.	1	8
„ „ „ 3"	„	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	„	24	10	0
20" × 10" Countesses	„	19	5	0
18" × 10" Viscountesses	„	15	10	0
18" × 9" Ladies	„	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	26	0	0
„ green	„ „	27	15	0
Best machine roofing tiles	„	4	10	0
Best hand-made do.	„	5	0	0
Hips and valleys	each			9½
„ hand-made	„			10
Nails, compo	lb.		1	4
„ copper	„		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	„ „			5
„ „ 2nds	„ „			4
Mahogany, Honduras	„ „		1	3
„ African	„ „		1	1
„ Cuban	„ „		2	6
Oak, plain American	„ „		1	0
„ Figured „	„ „		1	3
„ Plain Japanese	„ „		1	2
„ Figured „	„ „		1	5
„ Austrian wainscot	„ „		1	6
„ English	„ „		1	11
Pine, Yellow	„ „		1	0
„ Oregon	„ „			4
„ British Columbian	„ „			4
Teak, Moulmein	„ „		1	3
„ Burma	„ „		1	2
Walnut, American	„ „		2	3
„ French	„ „		2	3
Whitewood, American	„ „		1	1
Deal floorings, ¾"	Sq.		19	0
„ ⅞"	„	1	1	6
„ 1"	„	1	3	6
„ 1⅛"	„	1	7	6
„ 1¼"	„	1	12	0
Deal matchings ⅝"	„		14	0
„ ¾"	„		15	6
„ 1"	„	1	4	0
Rough boarding ¾"	„		16	0
„ 1"	„		18	0
„ 1½"	„	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/-	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1½"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
„ 3"-11½" long	„	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	„	11	1/3	2/2	2/10	5/3
„ „ 3"-11½" long	„	8	10	1/5	1/11	3/6
Bends	„	8	11	1/7½	2/7½	5/2
Springs not socketed	„	5	7	1/1½	1/11½	3/11
Socket unions	„	2/-	3/-	5/6	6/9	10/-
Elbows, square	„	10	1/1	1/6	2/2	4/3
Tees	„	1/-	1/3	1/10	2/6	5/1
Crosses	„	2/2	2/9	4/1	5/6	10/6
PlainSockets and nipples	„	3	4	6	8	1/3
Diminished sockets	„	4	6	9	1/-	2/-
Flanges	„	9	1/-	1/4	1/9	2/9
Caps	„	3½	5	8	1/-	2/-
Backnuts	„	2	3	5	6	1/1
Iron main cocks	„	1/6	2/3	4/2	5/4	11/6
„ „ with brass plugs	„	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61¼	„ water	47½
Steam	57½	„ steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	„ water	42½
Steam	47½	„ steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ⅜"	„	8	6
„ „ ½"	„	8	3
„ „ ⅝"	„	8	0
„ „ ¾"	„	7	6
„ „ ⅞"	„	7	6
„ „ 1"	„	7	6
„ „ 1¼"	„	7	6
„ „ 1½"	„	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	„	5	0	8	6
Boots	„	3	3	4	5
Bends	„	2	9	4	0
„ with access door	„	—		6	9
Heads	„	4	0	5	0
Swan-necks up to 9" offsets	„	4	0	6	3
Plinth bends, 4½" to 6"	„	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	„	1	7	1	11
Obtuse angles	„	2	0	2	6
Outlets	„	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	2	0
„ drawn pipes	„		19	0
„ soil pipe	„	1	6	0
„ scrap	„		14	6
Solder, plumbers'	lb.			10
„ fine do.	„		1	0
Copper, sheet	„			10½
„ tubes	„			11

L.C.C. soil and waste pipes:		3"		4"		6"	
Plain cast	F.R.	1	0	1	2	2	6
Coated	„	1	1	1	3	2	8
Galvanized	„	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	„	3	9	5	3	10	3
Shoes	„	2	10	4	4	9	6
Heads	„	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	„	2	10	0
„ fine	„	4	15	0
Hydrated lime	„	3	0	9
Sirapite	„	3	6	0
Keene's cement	„	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
„ rent	„		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2½
„ „ 26 oz. „ „ „	„					3½
Arctic glass, white	„					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	„					6½
¼" Hartley's rough rolled	„					7
¼" „ wired cast	„					10
¼" Georgian wired cast	„					11
¼" Polished plate, n/e 1 ft.	„		†7½	to	‡1	0
„ „ 2	„		†10	„	‡1	3½
„ „ 3	„	†1	4½	„	‡1	10
„ „ 4	„	†1	11	„	‡2	4
„ „ 6	„	†2	3	„	‡2	7½
„ „ 8	„	†2	5	„	‡3	0½
„ „ 12	„	†2	10	„	‡3	3½
„ „ 20	„	†3	3½	„	‡3	9
„ „ 45	„	†3	6½	„	‡4	0½
„ „ 65	„	†3	11½	„	‡4	4
„ „ 90	„	†4	4	„	‡4	9
„ „ 100	„	†4	6	„	‡4	11
Vita glass, sheet, n/e 1 ft.	„				1	0
„ „ „ „ 2	„				1	3
„ „ „ over 2	„				1	9
„ „ plate, n/e 1 ft.	„				1	6
„ „ „ 2	„				3	0
„ „ „ 3	„				4	0
„ „ „ 7	„				5	0
„ „ „ 15	„				6	0
„ „ „ over 15	„				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	1
Boiled oil	„		2	3
Turpentine	„		4	9
Patent knotting	„		14	0
Distemper, washable	cwt.	3	0	0
„ ordinary	„	2	5	0
Whitening	„		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	„		14	0
Outside varnish	„		16	0
White enamel	„	1	15	0
Ready-mixed paint	„		13	6
Brunswick black			7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
„ to reduce levels n/e 5' 0" deep and cart away	Y.C.		8	6
„ to form basement n/e 5' 0" deep and cart away	„		9	0
„ „ 10' 0" deep and cart away	„		9	6
„ „ 15' 0" deep and cart away	„		10	0
If in stiff clay . . . add	„		2	6
If in underpinning . . . „	„		4	0
Digging, return, fill and ram . . . „	„		4	0
Planking and strutting to sides of excavation	F.S.		1	0
„ „ to pier holes	„			5
„ „ to trenches	„			5
„ „ extra, only if left in	„			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	„	1	6	0
„ „ „ (4-2-1)	„	1	12	6
„ „ „ underpinning	„	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and gratings	„	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
„ „ in cement	„	29	15	0
„ Stocks in cement	„	35	15	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			5½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	„	6	9
¾" paving or flat	„	4	0
1" paving or flat	„	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

			s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	„	3	7	0
Do., 24" × 12"	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles.	„	2	16	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" „ „ „ „	„	1	17	6
1¼" „ „ „ „	„	2	3	0
¾" × 2" fir battening for Countess slating	„		9	6
Do. for 4" gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1½" „ „ „ „ „	„		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	„	2	12	6
1½" do.	„	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1½" do.			1	11
1½" deal moulded sashes of average size	F.S.		1	11
2" „ „	„		2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	„		3	9
2" „ „ „	„		4	0
Extra only for moulded horns	Each			6
1½" deal four-panel square, both sides, door	F.S.		2	0
2" „ „ „	„		2	8
1½" „ but moulded both sides	„		2	4
2" „ „ „	„		3	0
4" × 3" deal, rebated and moulded frames	F.R.		1	2
4½" × 3½" „ „	„		1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.		1	9
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	„		2	6
1½" deal moulded wall strings	„		2	1
1½" „ outer strings	„		2	4
Ends of treads and risers housed to string	Each		1	9
3" × 2" deal moulded handrail	F.R.		1	3
1" × 1" deal balusters and housing each end	Each		2	0
1½" × 1½" „ „	„		2	9
3" × 3" deal wrought framed newels	F.R.		1	3
Extra only for newel caps	Each		6	0
Do., pendants	„		6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	16	6
Do. in flashings		1	19	0
Do. in covering to turrets, etc.	„	2	6	0
Do. in soakers	„	1	12	0
Labour to welted edge	F.R.			3½
Open copper nailing	„			3¾
Close „ „	„			4½

		½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1¼" s.	1¼" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks	F.R.	1	0	1	2	1	5	2	1	3	0	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	3
Do. to stop ends	„		6½		8		9		11	1	3	—	
Boiler screws and unions	„	3	3	3	9	5	0	8	0	—		—	
Lead traps	„	—		—		—		6	3	8	9	—	
Screw down bib valves	„	6	9	9	6	11	0	—		—		—	
Do. stop cocks	„	9	0	11	0	14	6	20	6	47	0	—	

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	9
Do. vertical	„		2	3
Rough render on walls	„		1	4
Render, float and set in lime and hair	„		2	0
Render and set in Sirapite	„		2	2
Render, backing in cement and sand, and set in Keene's cement	„		3	1
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R.			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1" girth	„			1½
1" granolithic pavings	Y.S.		3	6
1½" „	„		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	„		17	6
9" × 3" „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

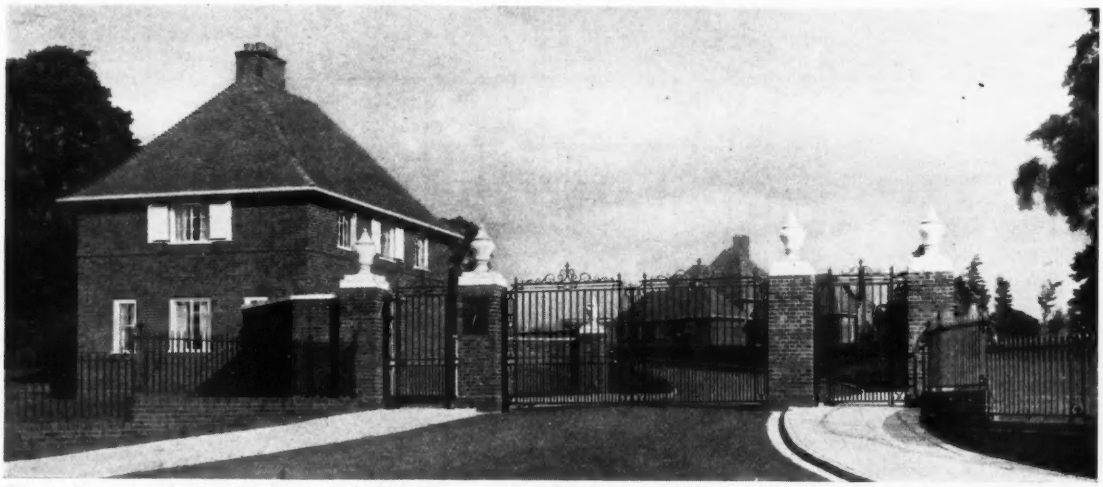
		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	„	2	9

MATERNITY HOME, STOURBRIDGE

DESIGNED BY: :MARTIN AND MARTIN AND W. H. WARD



THE LODGE, AND IRON ENTRANCE GATES

AT the entrance to the grounds of the Mary Stevens Maternity Home, Oldswinford, near Stourbridge, are the ornamental iron gates and the lodge illustrated above, from which the main buildings are approached by a winding drive.

As shown by the plans on the last page of this Supplement, the scheme comprises the main block, isolation block, lodge, laundry, garage, boiler house, disinfecting unit and other outbuildings. The main block is a three-story building (see elevational drawings reproduced overleaf).

The centre of the S.E. front contains the administrative rooms. The isolation block for two beds, together with duty room, kitchen and sanitary annexe, has been planned at the west end of the main corridor, and is connected with the main block by a covered way. The first floor comprises the nurses' home.

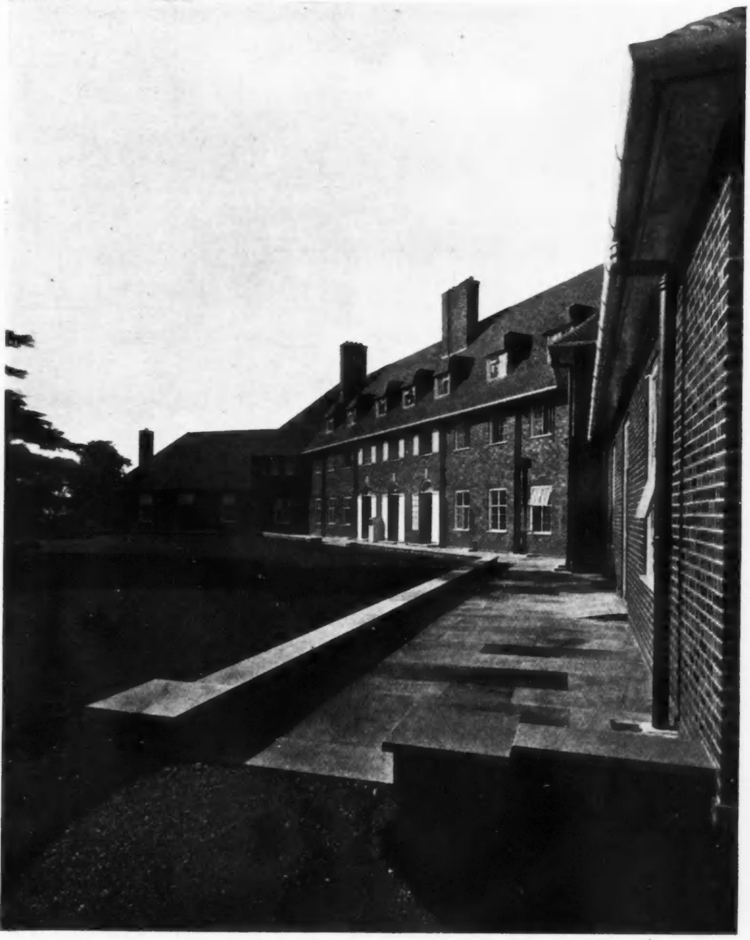
Each bedroom is fitted with a built-in wardrobe and washbasin, with hot and cold water; and all rooms are heated by radiators.

The top floor provides accommodation for additional bedrooms in the event of future extensions.

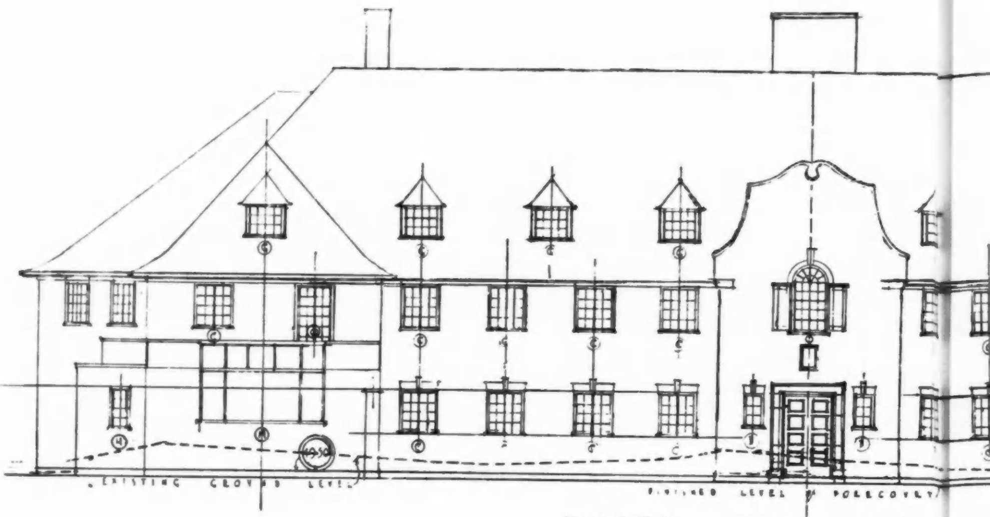
The buildings are heated throughout from a central boiler house, the boilers being oil fired, and thermostatically controlled.

There is an internal telephone system between departments.

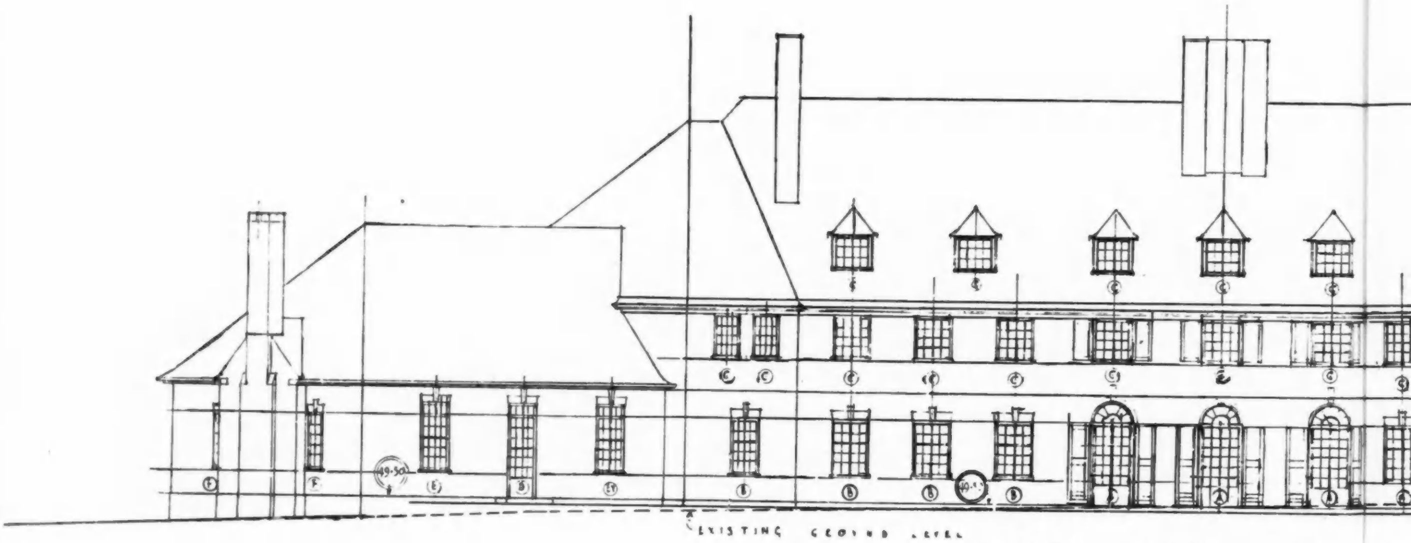
Other pictures of the Home appear in the body of this issue.



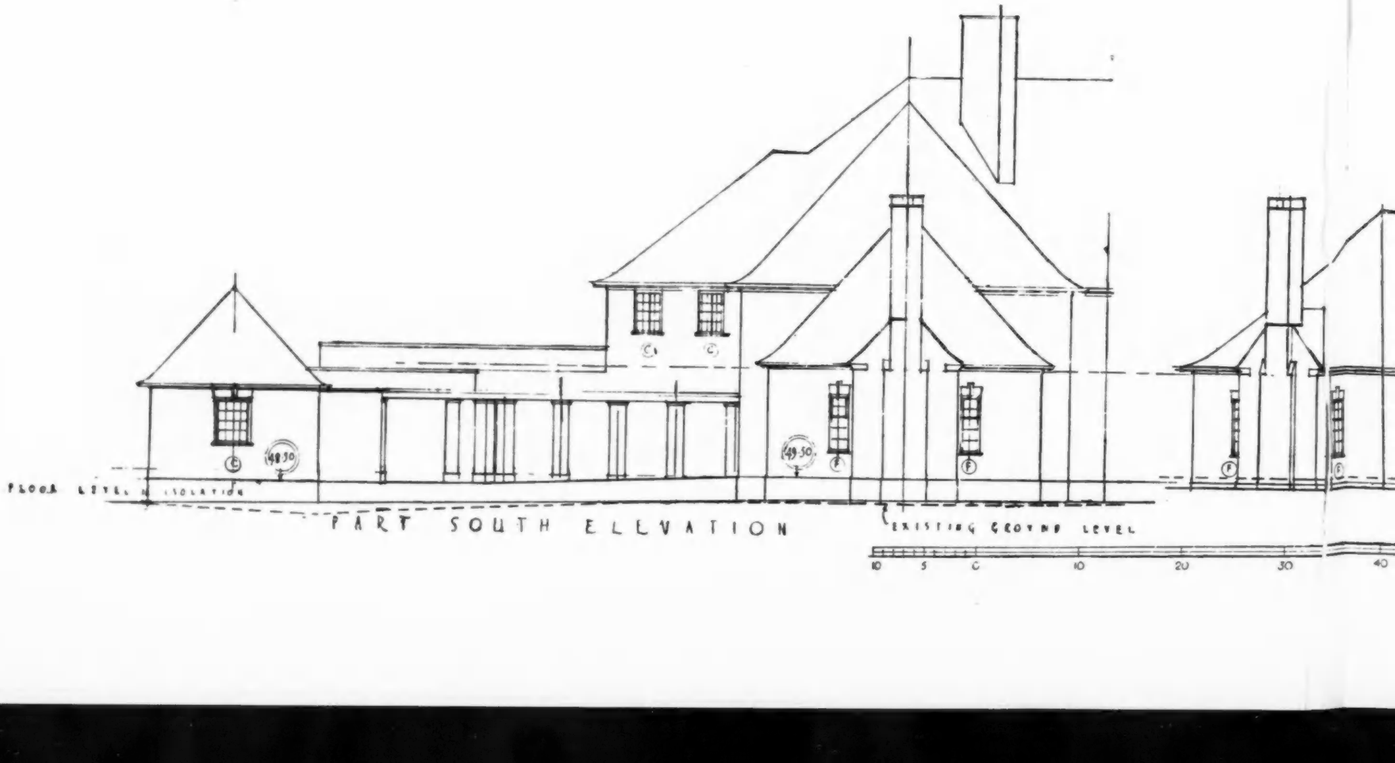
THE SOUTH-EAST FRONT


EXISTING GROUND LEVEL
FINISHED LEVEL OF FORECOURT
49·50

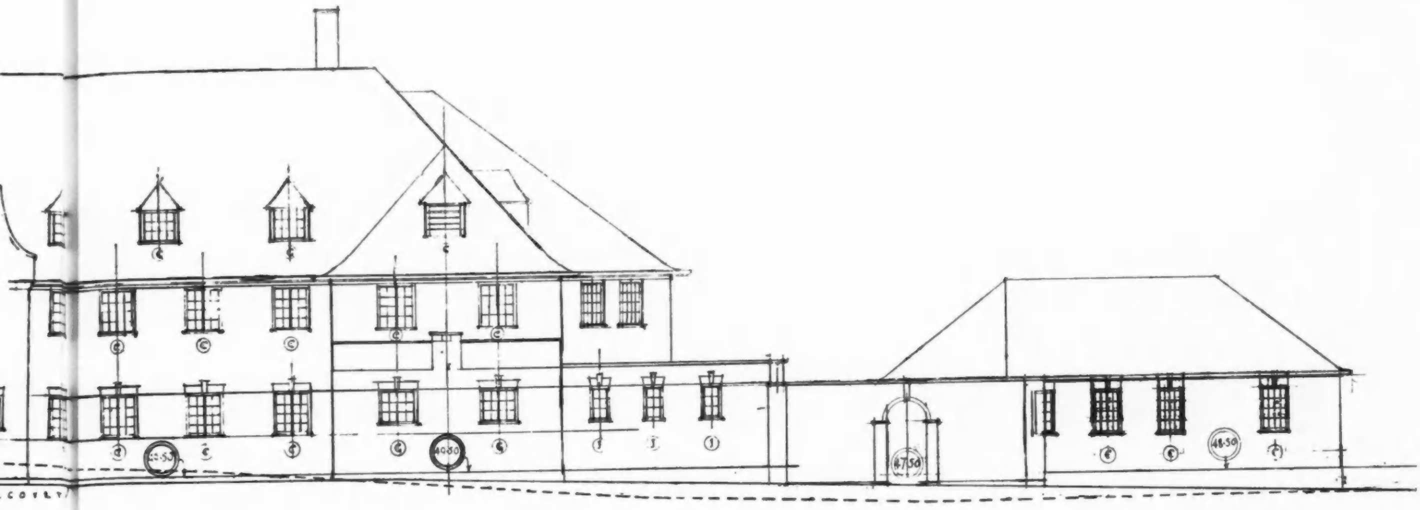
NORTH WEST ELEVATIO


49·50
EXISTING GROUND LEVEL

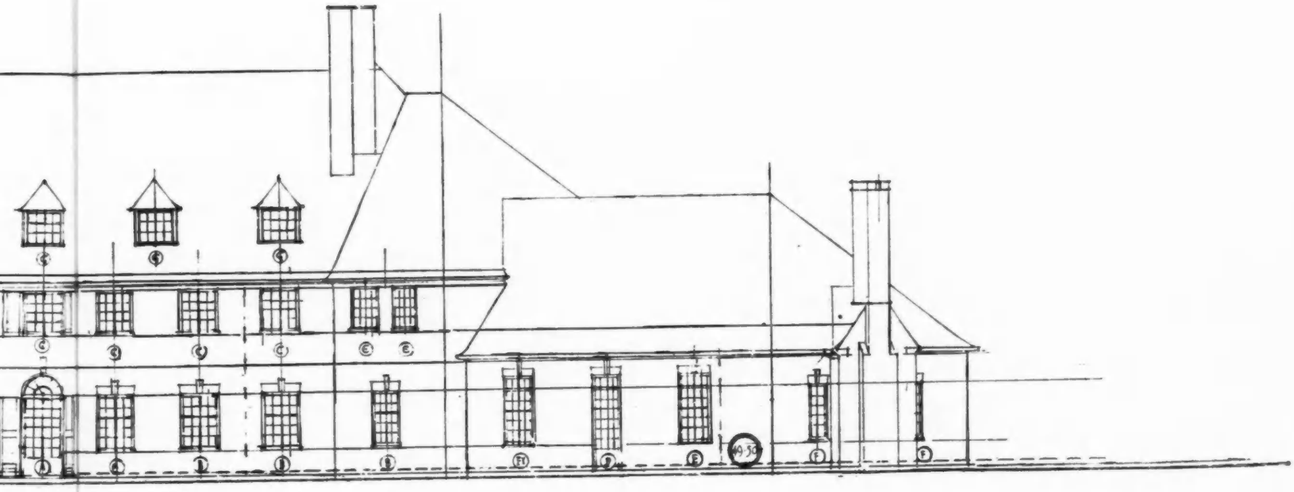
SOUTH EAST ELEVATIO


FLOOR LEVEL OF ISOLATION
49·50
EXISTING GROUND LEVEL
10 5 0 10 20 30 40

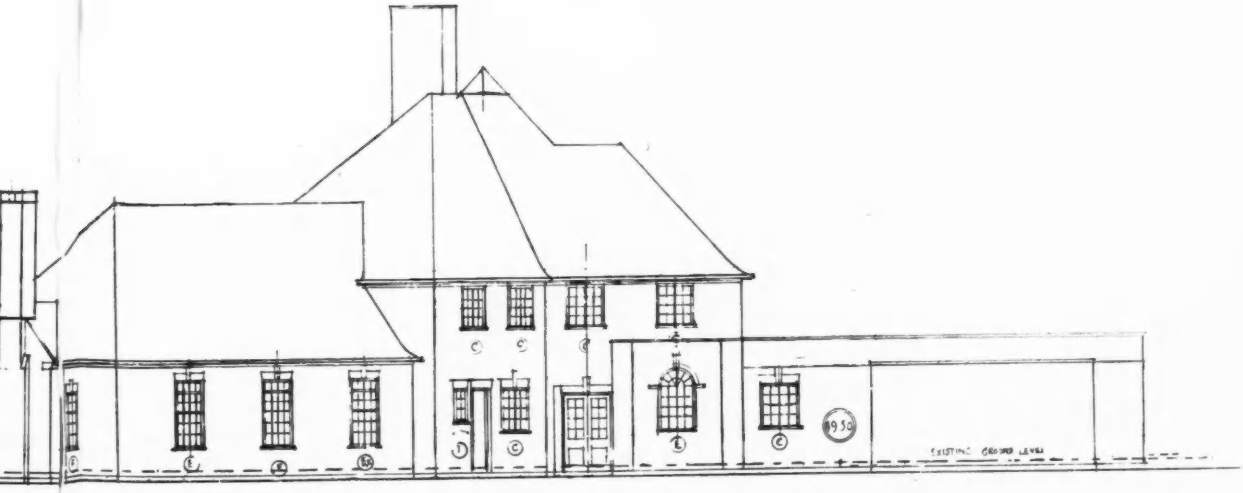
PART SOUTH ELEVATION


55.53
49.80
47.50
48.50

LEVATION

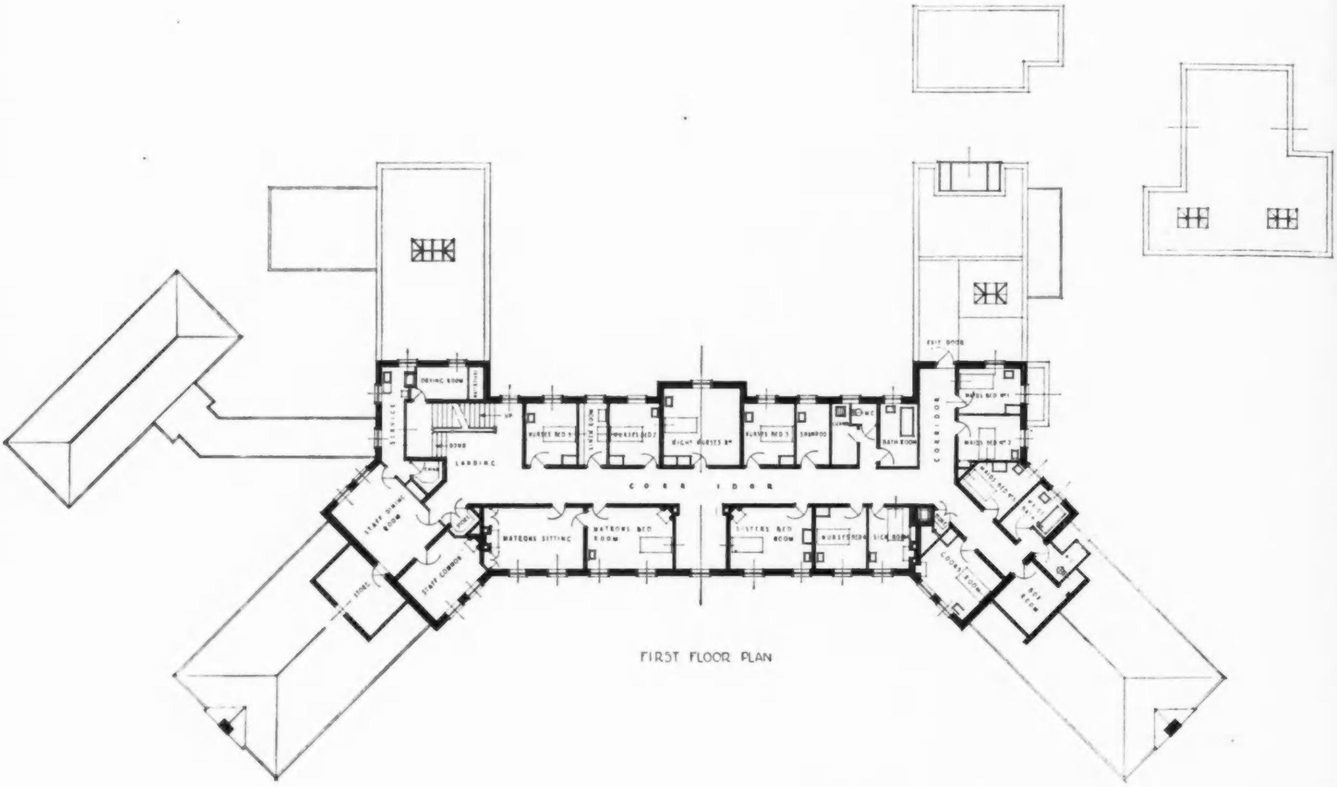


LEVATION

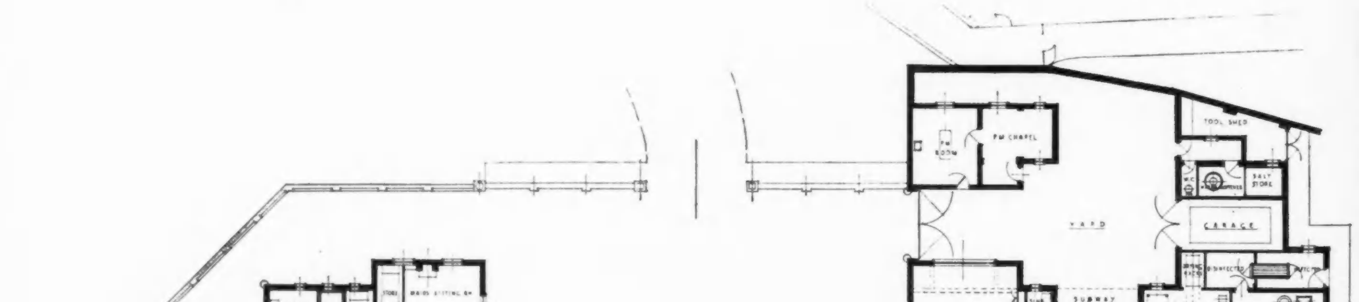

49.30
EXISTING GROUND LEVEL

NORTH EAST ELEVATION

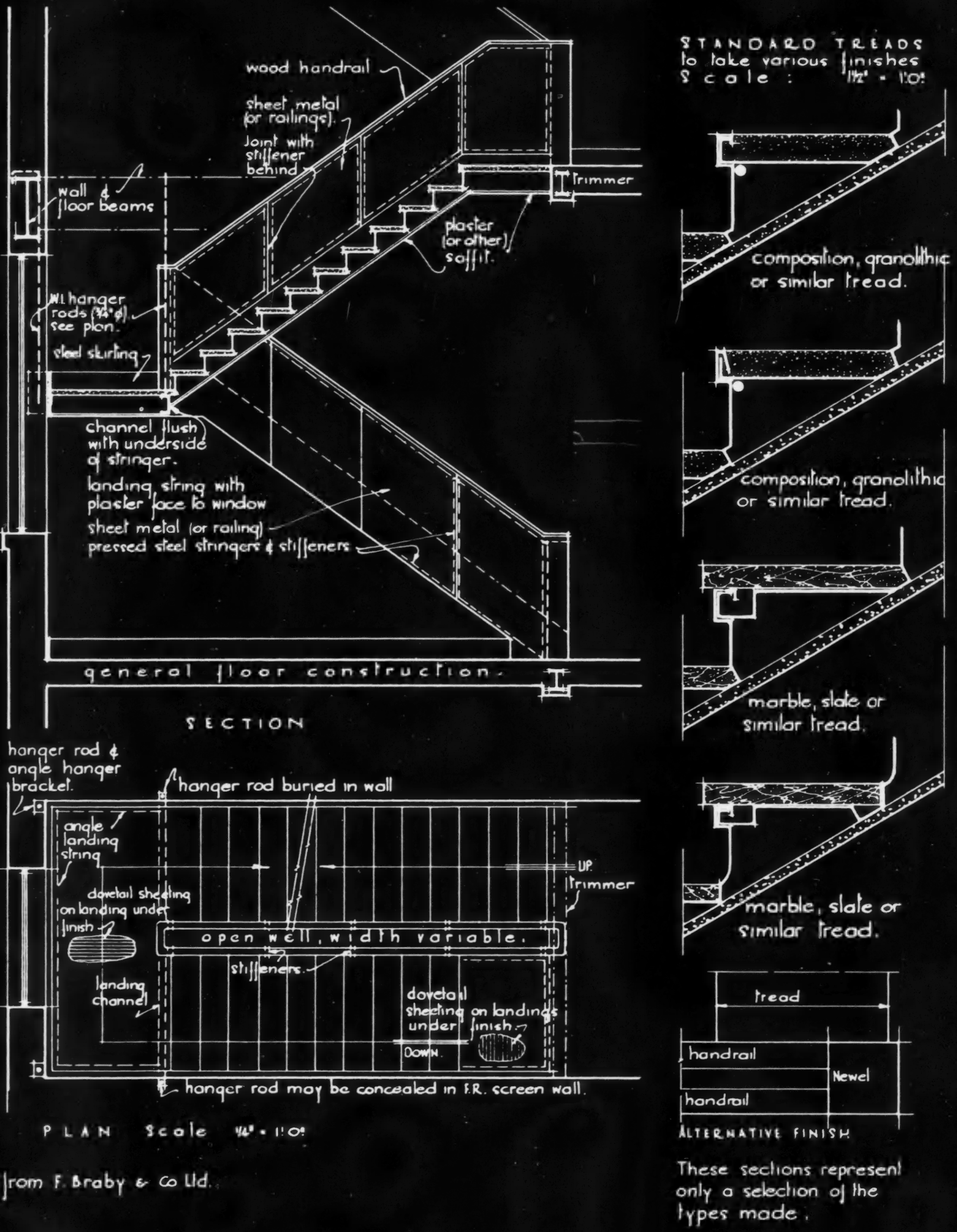
30
40
50


SERVICE
DRYING ROOM
UP
LANDING
NURSES BED 1
NURSES BED 2
NIGHT NURSES Rm
NURSES BED 3
SHAMPOO
W.C
BATH ROOM
EXIT DOOR
CORRIDOR
MAIDS BED No 1
MAIDS BED No 2
MAIDS BED No 3
CORRIDOR
STAFF DINING ROOM
STAFF COMMON
STORE
MATRONS SITTING
MATRONS BED ROOM
SISTERS BED ROOM
SICK ROOM
COOKS ROOM
BOX ROOM

FIRST FLOOR PLAN


HOUSE COAL
STORE
MAIDS SITTING Rm
TRADESMENS ENTRANCE
LOBBY
SCULLERY
KITCHEN
STAFF CLOAKS
LOBBY
COURTYARD
ISOLATION BLOCK
SINK ROOM
WARD KITCHEN
NURSES ROOM
W.C.
LOBBY
TWO BED ISOLATION
PAVING
COVERED WAY
UP
ANTI NATAL ROOM
CUBICLES
FRONT ENTRANCE
ENTRANCE HALL
ADMISSION ROOM
BATH ROOM
CORRIDOR
MATTRESSES
SINK ROOM
CUT OFF
BATH ROOM
CORRIDOR
ONE BED WARD
WARD KITCHEN
6 BED WARD
NURSERY
BABIES BATH
MATRONS OFFICE
DOCTORS ROOM
DUTY Rm
TWO BED WARD
TERRACING
P.M. ROOM
P.M. CHAPEL
YARD
TOOL SHED
W.C.
SALT STORE
GARAGE
DISINFECTED
SUBWAY
LABOR UNIT
SINK ROOM
SCRUB UP
STERILIZING ROOM
DOWN TO BOILERS
CLINICAL LABORATORY
CORRIDOR
CHAPEL
GRASS
IRONING
WASHING HOUSE
EXIT
ENTRANCE
LOBBY
LINEN
SINK ROOM
CUT OFF
W.C.
BATH ROOM
CORRIDOR
ONE BED WARD
WARD KITCHEN
6 BED WARD
Scale
10
20
30
40
50
60
70
80
90
100
of feet

GROUND FLOOR PLAN


wood handrail
sheet metal (or railings).
Joint with stiffener behind
wall & floor beams
trimmer
plaster (or other) soffit.
W.I. hanger rods (¾" ø). see plan.
steel skirting
channel flush with underside of stringer.
landing string with plaster face to window
sheet metal (or railing)
pressed steel stringers & stiffeners
general floor construction.
SECTION
hanger rod & angle hanger bracket.
hanger rod buried in wall
angle landing string
UP.
trimmer
dovetail sheeting on landing under finish
open well, width variable.
stiffeners.
landing channel
dovetail sheeting on landings under finish.
DOWN.
hanger rod may be concealed in F.R. screen wall.
PLAN Scale ¼" = 1'0"
from F. Braby & Co Ltd.
STANDARD TREADS to take various finishes Scale : 1½" = 1'0"
composition, granolithic or similar tread.
composition, granolithic or similar tread.
marble, slate or similar tread.
marble, slate or similar tread.
tread
handrail
Newel
handrail
ALTERNATIVE FINISH.
These sections represent only a selection of the types made.

DIAGRAMMATIC LAYOUT OF INTERLOCKING PRESSED STEEL STAIR CONSTRUCTION
SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.I.

INFORMATION SHEETS

• 24 •

PRESSED STEEL STAIRS: 1

•

OF the set of nine sheets now in progress, devoted to staircases, this, the eighth, is one of a pair illustrating the lay-outs and methods of construction in pressed steel; its fellow, to be published next week, will conclude the series on stair construction.

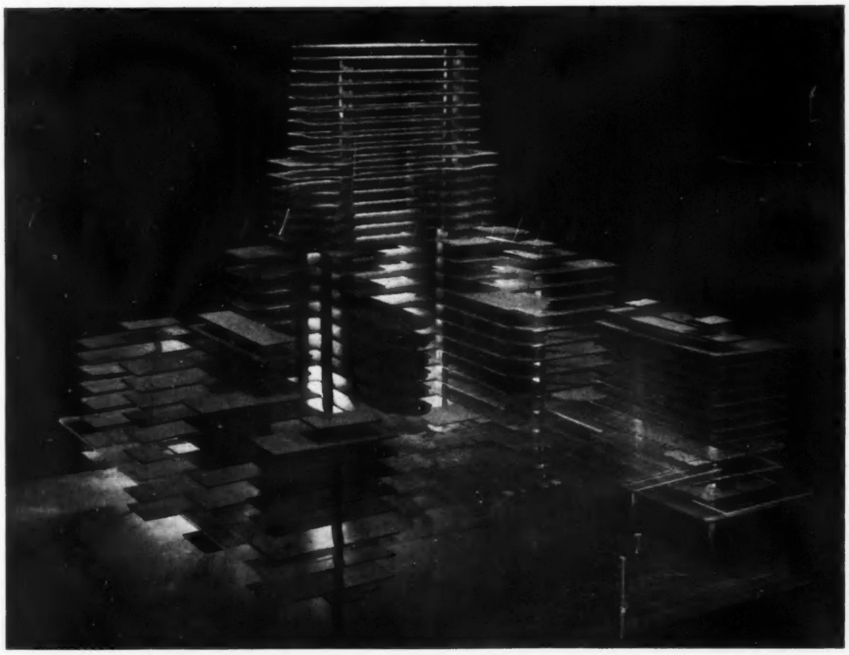
Again, in this week's issue, an Information Sheet figures amongst the advertisements; on pp. xxiii and xxiv will be found details and data concerning the uses of Tentest for roof construction, prepared by the manufacturers (The Tentest Fibre Board Co., Ltd.) for the information of their architectural clients. The sheet is perforated, so that it can be torn out and filed for reference.

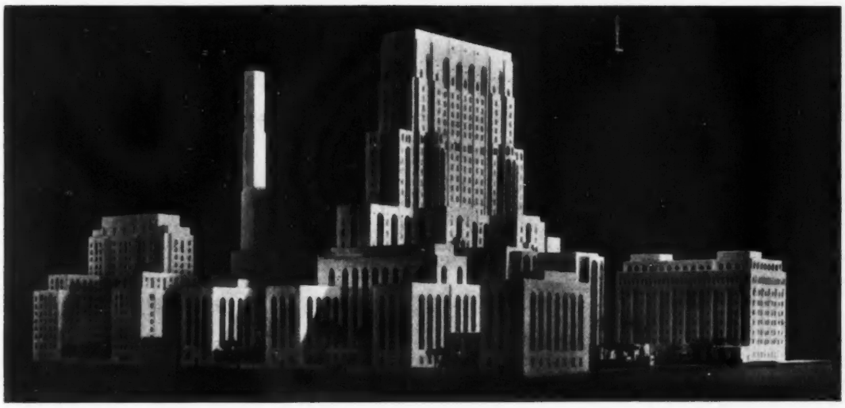
The following is a full list of the subjects previously issued:—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units.
13. Apr. 12—Lavatory Units.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes.
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs: 1.
23. June 29—Concrete Stairs: 2.

MODERN STRUCTURE

AS INTERPRETED AT THE NEW YORK HOSPITAL





ABOVE is the skeleton model of the New York Hospital, by Coolidge, Shepley, Bulfinch and Abbott, which won the Gold Medal in the Annual Exhibition of the Architectural League of New York. Below is a skeleton model of the work as completed this year.

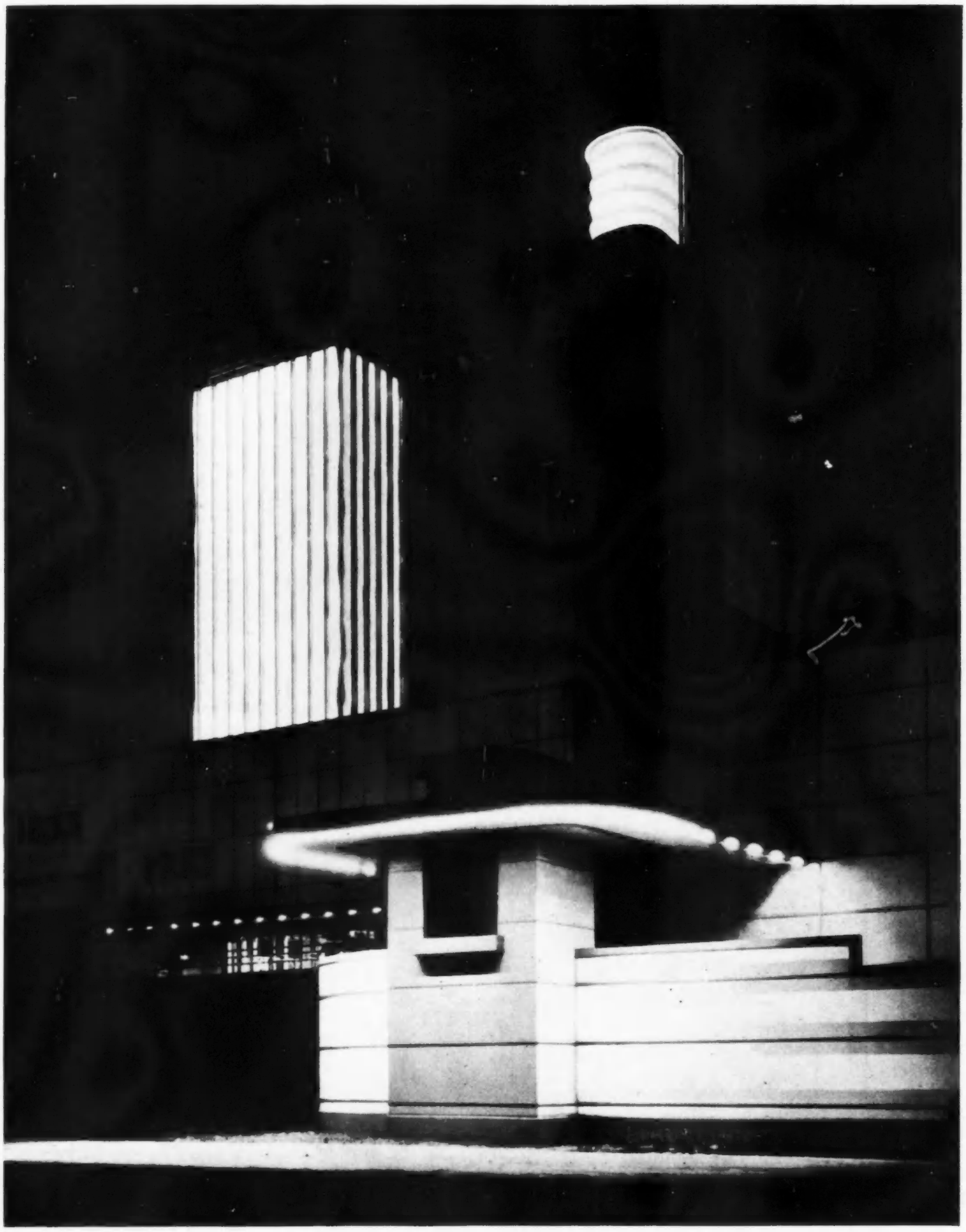
The upper picture in its diagrammatic way, suggests something of the potential beauty that would have come from an honest expression of its structural form.

In the lower picture this promising skeleton has been concealed in a cupboard of the Modern American Uplift *style.*

" The steel frame," we are told, " is faced with light brick above a one-story base of variegated limestone. Several studies were made before the architectural treatment was determined."

The programme for the design of the entrance hall required that it should not look like a hospital, hotel, apartment house, bank or chapel, but that it should translate the spirit of the exterior appearance of the building into interior architecture. The average person should walk through the hall without noticing it, but a cultured person should be arrested by its beauty—a requirement invented by the director.

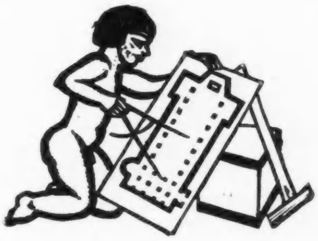
These photographs also provide an admirable illustration to the article " Weight Saving in Frame Buildings " that appears on page 55 of this issue.



AT THE CHICAGO WORLD FAIR

The Hall of Science photographed at night to show the neon illumination.

In an article in this issue Mr. Frank Lloyd Wright, the American architect, gives his valuation of the "Century of Progress," which it is the purpose of the exhibition to demonstrate.



INFORMATION

THE remarkable change that has made contemporary methods of building organization so different from those of previous eras consists largely in the gradual elimination of the system of trial and error on which, in the past, building methods were based. For this change two influences are responsible; the ever-increasing importance of the time-factor, and the ever-lessening contact between the designer and the maker.

When the designer and the maker were actually the same person problems that arose were solved on the spot by the craftsman's knowledge of his material—in fact, the craftsman's *information* was exactly synonymous with his knowledge of his craft. Nowadays, when the craftsman or machinist has to be instructed from a distance by a designer who is not necessarily familiar with actual processes, it has become essential that this designer (that is to say, the architect) should be provided with such information as will enable him to know in advance the result that these processes are going to produce. The architect, in fact, must resign any ambition to find out for himself what a material will do and be content to rely on the technician and the manufacturer to guide him towards the best use of his (the manufacturer's) products. The architect has no time to indulge in personal research and, in deference to the time-factor previously mentioned, the information supplied to him must be systematized and tabulated into an easily available form.

The possibility of providing information in such a form has been greatly increased by the advent in recent years of another factor—mass-production and the standardization that is the result of mass-production; for the reduction of *building-construction* to the manipulation of a large number of standardized units will be the ultimate outcome of the system, optimistically christened *Technocracy*, on which we are now launched.

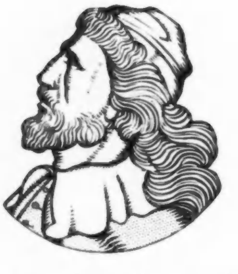
Since the earliest days of technocracy in the middle of last century tabulated information has been forthcoming when it was needed. It began successfully enough with Bradshaw and the Nautical Almanack, but in recent years the acceleration of the movement towards absolute standardization and, even more, the unnecessary multiplication of units produced by competitive interests have caused the supply of information to lag far behind the demand; and it was a desire to do something towards relieving this chaotic condition that prompted Sir John Burnet, Tait and Lorne to produce their series of Information Sheets, and ourselves to publish them as a regular feature of this JOURNAL.

A rationalization is needed of the drawing-board side of architecture similar to that which is already taking place on the industrial side.

In America, where architecture has always been more thoroughly organized on the drawing-board side and where, for example, such aids to efficiency as the "time and progress schedule" have long been in use, practical and systematized information has already an assured place in the architect's office—is, in fact, as essential a part of his office equipment as the typewriter or the telephone; and that we in this country are aware of the lack of it is apparent from the welcome given to the Information Sheets that we have published. But the architect cannot work unaided. Obviously co-operation on the part of the manufacturer is required to produce any system of standardized information, and in view of this we have recently laid before manufacturers who use the advertising pages of this JOURNAL a proposal that they should follow Sir John Burnet, Tait and Lorne's lead by casting certain of their advertisements in the form of tabulated information about their products. As readers have no doubt seen, several manufacturers have already shown that they are prepared to co-operate. In order to standardize this information as far as possible we have suggested that their sheets should follow the format of the editorial information sheets, and a perforated edge has been provided so that they may be detached and filed if desired. Eventually, perhaps, these sheets may form the basis for some kind of co-ordination of manufacturers' catalogues; the object of a large proportion of trade catalogues being, after all, only to provide information in a way that shall be most useful to the architect.

In order to cultivate the type of technical information which is required we are ourselves taking a further step by reinforcing the Information Sheets with an Information Supplement. This supplement deals with recent developments in structure, and will be found in this issue on pages 49-58. It will be followed by others at regular intervals.

The importance of these sheets and supplements lies, we believe, not merely in the provision of information in a convenient form for the architect—of a digest, that is to say, of all the potentially useful matter that he has constantly to use in his practice—but in the impetus they should give to everyone concerned with building to apply the principle of ordered planning to technical details as well as to large projects.



Inigo Jones, the anniversary of whose birth occurs this week. He was born on July, 15, 1573. Apostle of Palladio, Surveyor-General in turn to James I and Charles I of England, and patron saint of THE ARCHITECTS' JOURNAL. *He died in poverty in 1651.*

NOTES & TOPICS

A SUMMER SCHOOL OF TOWN PLANNING

THERE is to be a Summer School of Town and Country Planning at Welwyn from September 11 to 17, and nobody is more pleased than I. For it will mean that in an atmosphere removed from the grinding processes of "implementation" of Acts and bye-laws, town-planners and architects may take stock of the situation created by the passing of the Town and Country Planning Act, and by the no less important "slum clearance" manifesto of the Government.

*

This is a critical moment for Town Planning: a parting of the ways; or, at least, a defining of attitudes towards the towns, towards the new State reorganization schemes for industry and agriculture, and the rival problems of re-planning and decentralization. In the right atmosphere a great deal can be said and formulated and, under the chairmanship of Thomas Adams, I have no doubt that the organizing committee have drawn up a syllabus that will give plenty of room for hot discussion.

*

Frank Lloyd Wright, whose words you may read on a later page, is an example of a great architect who worked dead against the whole architectural tendencies of his times. He was an engineering student at Wisconsin University in 1889, and started to practice architecture in 1893. At that time in England William Morris was sending out his disciples: Gimson, Walton, Voysey, Macintosh; a group was working towards new ends which the continent of Europe, if not England, applauded and copied.

*

And across the Atlantic this prime individualist, Frank Lloyd Wright, was working out his prophetic salvation in forms so foreign to his fellows as to suffer a neglect that would have killed a weaker man.

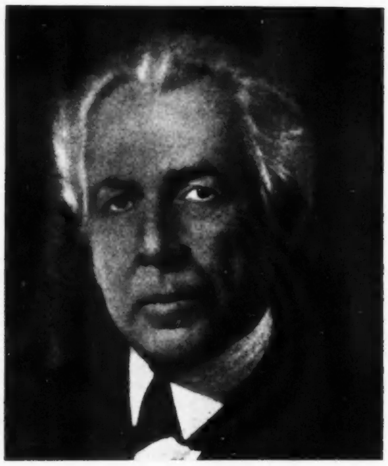
Few shared his passion for the integrity of construction or saw the force of his grand designs, which weigh the scales against a whole continent of pretty masonry—the work of his "betters."

*

In the Larkin Building, the Taliesin Home, Wisconsin, and in that so un-American building, the Imperial Hotel, Tokyo, can be read the struggles of a great artist towards the solution of problems of construction and design, which Europe, and at long last, America, begins to recognize as the real stuff of contemporary architecture.

*

Possibly Frank Lloyd Wright will never be acclaimed in his lifetime. The fact remains—and the sooner Americans accept it the better—he is by far the greatest architect the United States has yet produced.



Frank Lloyd Wright

THE PHILHARMONIC HALL, LIVERPOOL

There is much speculation in Liverpool about the rebuilding of the Philharmonic Hall, described by Richter as the finest concert room in Europe, which was gutted by fire last week.

*

By a clause in the lease the hall must be rebuilt, and the question is whether the committee of the Philharmonic Society will order a replica of the old building or have a completely new hall. There may be a risk of their taking the first course on the grounds that the original hall was acoustically perfect, but this point of view ignores the fact that acoustics is now an exact science and that in any case a replica would not give the same results, since it could not be a precise replica.

*

The old building had a wooden and extremely inflammable roof. In a new building the roof would be fireproofed, a change which must affect its resonance.

*

The gutted hall was designed by John Cunningham in 1847. It was a competent example of Victorian classic, but lacked gaiety and was seated in an uncomfortable manner, all the gallery and most of the boxes being at right-angles to the platform. The rebuilding offers a splendid architectural opportunity, if the committee will rise to it.

B.I.A.

The B.I.A. exhibition at Dorland Hall closed yesterday. So ends the first chapter of—what? That remains to be seen. I believe myself that the results of this exhibition will surprise a good many sceptical persons.

*

The night before the closing I attended a dinner held in honour of the Secretary of the exhibition, Mr. Richard Dudley Ryder. Nice things were said about Mr. Dudley Ryder. He deserved them. The life of an exhibition secretary is probably the nearest approach to death by slow torture that exists in the modern world. And the torture isn't so slow either. Mr. Ryder has not succumbed. It is generally conceded that he has made a brilliant success of this difficult job.

*

MR. CAN AND MR. CAN'T DESIGN

The best cure for any optimism that one may have brought away from the Dorland Hall Exhibition is to glance in the shop windows of any big provincial city. I have been taking this cure myself this week.

*

I have found one piece of originality (of a kind) in a shopkeeper's method of drawing attention to himself, but there the matter ended.

*

One shop, a retail furnisher's, had plastered its windows with large posters. I quote from three of them :—" THE GREAT CONFUSION : that low prices necessarily mean good value." The next went one better : " THE GREAT EFFUSION of high pressure advertisements is the dope that sells the junk." Finally : " THE GREAT ILLUSION in furniture is staged by mess production manufacturers."

*

All very bold and vigorous and I glued my nose to the display windows, hoping to see bold and vigorous influences at work in the design of the goods that were for sale. I didn't.

*

ENGINEER, NEW STYLE

The engineer has entered a new phase. Let me recommend *Forward from Chaos* (Nisbet, 6s.), by A. P. Young, who is himself a brilliant engineer.

*

Mr. Young is discussing industry and the machine and the sources of energy which engineers—and business men—use for making profits. Suddenly he says : " All the energy available to man has its source in the sun, and it helps to induce the right attitude of mind to all our problems to reflect that all life and activity on this planet is supported by an electro-magnetic vibration travelling at a speed of 186,000 miles per second over a distance of ninety-two million miles—through what appears to be nothingness."

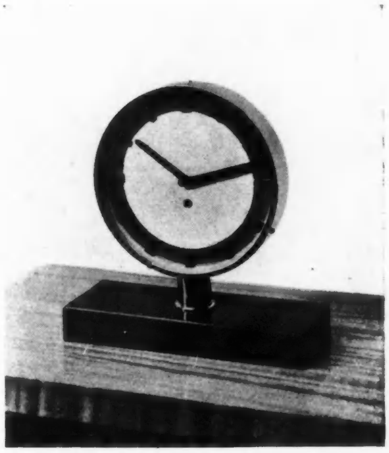
*

Does this explain what I mean by saying the engineer has entered a new phase? If it doesn't, get the book and read it.

*

THE SOUND AND THE FURY

Coming back from our big provincial hives of industry (if I may coin a phrase), I could not help comparing the comparative peace and quiet with the frightful noise that is going on in London at the moment. I dislike " old veteran " touches heartily, but I can't recall any day on the Western Front which had such a concentration of racket as is afforded by London at the moment.



A synchronized electric clock, designed by R. W. Symonds

*

They are taking up the road in spadefuls everywhere with the help of pneumatic drills. Steelwork is being riveted all over the place, and the method of everybody who drives a car of expressing their irritation is to make more noise.

*

If this goes on much longer the stone draperies on some of our near-classic buildings will peel off and expose the honest skeleton beneath. ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, July 13

ARCHITECTURAL ASSOCIATION, 34, *Bedford Square, W.C.*1. Exhibition of recent work of the Egypt Exploration Society. Until July 15. 10 a.m. to 10 p.m. 10 *a.m.*

*ROYAL ACADEMY, Burlington House, Piccadilly, W.*1. Summer Exhibition. Until August 7. 9 a.m. to 7 p.m. 9 *a.m.*

SOCIETY OF CHEMICAL INDUSTRY. At Newcastle-on-Tyne. Annual General Meeting. Until July 14.

Friday, July 14

BUILDING CENTRE, 158, *New Bond Street, W.*1. Housing Exhibition. Until July 29.

ARCHITECTURAL ASSOCIATION, 34, *Bedford Square, W.C.*1. Annual prize distribution and exhibition of work by students of the A.A. School of Architecture. 3.30 p.m. The exhibition will remain open until July 29. 10 a.m. to 6 p.m. 3.30 *p.m.*

NATIONAL SMOKE ABATEMENT SOCIETY, 71, *Eccleston Square, S.W.*1. " The Effects of Smoke and Fumes on Buildings." By Sir Frank Baines, C.B.E., F.R.I.B.A. 3.30 *p.m.*

Saturday, July 15

Sunrise 4.52 a.m. Sunset 9.17 p.m.

ARCHITECTURAL ASSOCIATION, 34, *Bedford Square, W.C.*1. Exhibition of the Leverhulme Scholarship Drawings. Until July 29. 10 a.m. to 6 p.m. Also Annual Excursion to Milan (until July 30). 10 *a.m.*

Tuesday, July 18

LONDON SOCIETY. Visit to Whipsnade (by motor coach). 2.30 *p.m.*

NEWS

POINTS FROM THIS ISSUE

If the Adelphi must go, it must not be rebuilt until after the new Charing Cross Bridge has been settled 40

Chicago Fair—Net Result: Ideas? None. Scheme? Bad. Features? Commonplace. Style? Faked 46

The speculative builder gets on with the work while architects sit on the fence and shout, "You should not want this! You should have that!" 48

The sun balconies at the Freemasons' Hospital were only made possible by welding 52

Advantages of flat-slab construction .. 53

Amounts allowed for live load under the old and new regulations in London .. 55

Saving in cost by the use of high tensile steel 56

An interesting American floor construction to save weight 57

REINFORCED CONCRETE ASSOCIATION

We have received the first number of *The Review of the Reinforced Concrete Association*, published by that body. It is a brief but admirable general introduction to the subject of reinforced concrete buildings. Subsequent issues are to be devoted to specific types of structure, ranging from churches to garages, and workmen's dwellings to silos. The new *Review*—which is a well-written, well-illustrated and well-printed four-page leaflet—should be extremely valuable to architects, as it supplies the latest general and technical information on concrete construction in a very handy form. As a regular organ of this kind has hitherto been lacking in this country and the use of concrete is spreading more rapidly than ever, its appearance is doubly welcome. The *Review* will be sent gratis monthly to all architects, engineers and surveyors who forward their names and addresses to the Secretary, the Reinforced Concrete Association, 20 Dartmouth Street, S.W.1.

THE ARCHITECTS' JOURNAL PRIZE

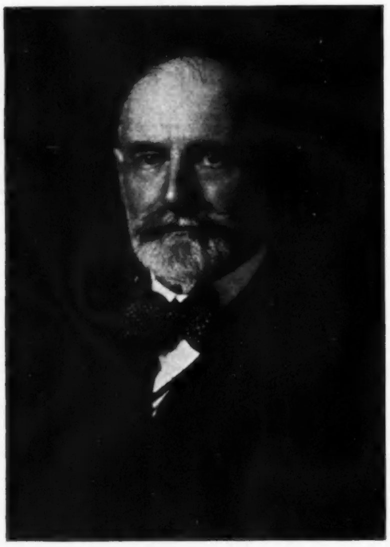
The prize presented every year by THE ARCHITECTS' JOURNAL to the School of Architecture, University of London, for the best final design produced in the Day School by a Fourth Year Student, has been awarded to Miss Esther M. Hamp, a Diploma Student. The subject was "A Library."

IS YOUR NAME ON THE LIST?

Recent increases in the activity of the Building Industry have resulted in increased employment in a very large number of trades. Nearly every industry, both home and export, shared this improvement in employment during June. This illustrates the way in which an increase, however slight, in building activity has widespread repercussions in other industries.

But while employment in other industries declined, unemployment in the building and public works industry increased. The increase in the case of building was 321 and for public works 817 for Great Britain. In view of this increase in a month which normally shows a decline in the numbers unemployed, and particularly in view of the fact that normally every month in the year after June shows an increase in unemployment, no effort must be spared to support the work of the Special Committee for Public Relations of the Building Industries National Council. There is some danger that, unless support is forthcoming on a larger scale, the benefits of the Committee's efforts in the past will be lost.

Subscriptions to the fund should be addressed to Mr. Oswald Healing, F.S.I., at 5 Duke Street, Adelphi, W.C.2.



John Little, the new president of the South-Eastern Society of Architects.

WATERLOO BRIDGE

A letter appeared in *The Times* on July 3 under the signature of Lord Mayo, drawing attention to the unsatisfactory interpretation the L.C.C. are putting on Parliament's sanction of the rebuilding of Waterloo Bridge.

It seems that the method explained to the House of Commons of reconditioning without destruction of existing work or obstruction of traffic is to be abandoned in favour of an elaborate scheme involving the closing of the bridge for some years and the blocking of several arches for river traffic; also, of course, additional expenditure.

As Lord Mayo points out, the public should at any rate be informed of the proposals and given an opportunity of questioning the L.C.C.'s authority.

MANCHESTER TOWN HALL EXTENSION

The Manchester Corporation Finance Committee has approved of the proposal that the building of the Town Hall extension should be proceeded with immediately. The estimated cost of the scheme is £977,030.

CAMBRIDGE MUNICIPAL OFFICES

The Cambridge Town Council last week approved a scheme for the reconstruction of its municipal offices on the present Guildhall site, at the Market Hill. Mr. C. Cowles-Voysey, F.R.I.B.A. has been appointed architect.

DINNER TO PROFESSOR A. C. DICKIE

On Saturday, July 1, in the Whitworth Hall, University of Manchester, a dinner was given in honour of Professor A. C. Dickie on his retirement from his position as head of the School of Architecture at the Victoria University of Manchester. Amongst those who spoke in appreciation of Professor Dickie and the work he has done for architecture were: Mr. J. Hubert Worthington, O.B.E., M.A., F.R.I.B.A.; Professor A. E. Richardson; Mr. W. B. Edwards, M.A., A.R.I.B.A.; Mr. R. A. Cordingley, M.A., A.R.I.B.A.; Mr. Alan Mackay; Mr. H. Speakman; and Mr. W. T. Butterick.

THIS ARSHETECTURE

HOUSING ALIENS' PROBLEM.—The question of the provision of houses for coloured persons and aliens disdisplaced from clearance areas has been under consideration by the Housing and Town Planning Committee of the South Shields Town Council. The Housing Inspector reported on the difficulty he was experiencing in dealing with those persons, and the Committee decided that the Borough Engineer should submit a scheme for the provision of dwelling-houses for such people.—*Newcastle Journal.*

VISIT TO SLUM CLEARANCE SCHEMES

The Garden Cities and Town Planning Association have arranged a tour of some of the most successful slum clearance schemes in the country. The towns to be visited include Newcastle, South Shields, Middlesbrough, Nottingham, and Birmingham. The last-named town was dealt with in the recent Slum Issue of the JOURNAL

The tour, which will take place from September 30 to October 6 inclusive, has been arranged with the municipalities concerned, and representatives of those cities will accompany the parties on each series of visits. The total cost is £13.

Full particulars are obtainable from Mr. A. T. Pike, Secretary of the Association, 3 Gray's Inn Place, W.C.1.

ARMSTRONG COLLEGE, NEWCASTLE-UPON-TYNE

A diploma and a certificate in town planning are to be instituted at Armstrong College, Newcastle-upon-Tyne, by the University of Durham. Courses for these qualifications will be given in the School of Architecture of the College from September next. The Town Planning Institute will grant exemption from its final examination to holders of the diploma.

I.A.A.S. ALL-BRITISH HOUSE EXHIBITION

The I.A.A.S. £1,000 All-British House Exhibition, which has been " on tour " for several months—at Liverpool, Manchester, Leeds, Sheffield and elsewhere—will be opened today by Sir Edwin Lutyens, R.A., P.I.A.A.S., at Messrs. Brown & Co.'s (Chester) Ltd.'s, establishment, 34-40 Eastgate Row, Chester. The exhibition will be open till July 23.

THE LEVERHULME SCHOLARSHIPS

The designs of the first holders of the Leverhulme Scholarships will be on exhibition at the Architectural Association, 34-36 Bedford Square, W.C.1, from July 15 to July 29 (10 a.m.–6 p.m.).

The Leverhulme Scholarships are intended to enable suitable British students of insufficient means to obtain a full training for the architectural profession in the Architectural Association School of Architecture.

The scholarships entitle the successful competitors to payment of school fees, maintenance allowance, and an annual grant for materials and travel.

The closing date for applications each year is June 1.

A.A. PRIZE-GIVING

The annual prize-giving and exhibition of work by students of the Architectural Association School of Architecture will take place at 34 Bedford Square, W.C., tomorrow, at 3.30 p.m. An address will be given and the prizes distributed by the Rt. Hon. the Earl of Crawford and Balcarres.

The exhibition will remain open until uly 29.

Porte en tour ronde
biaise et en talut la
mesme rachetant un
Hemicycle.

THE
ADELPHI

[*By M. I. BATTEN*]

[*In the following article Miss Batten discusses the proposals put forward in the Adelphi Estates Bill which came before the House of Commons on Wednesday evening. The importance of this decision regarding the fate of the Adelphi lies not only in the saving or losing of a delightful piece of London, but in the precedent the decision will set for dealing with the many questions of a similar kind that are bound to arise within the next few years.*—ED., *A.J.*]

CARLTON House Terrace, the Adelphi, Covent Garden Opera House, Bedford Square—there seems to be a disease raging through London at the present time whereby all the buildings which are of real æsthetic and historic value are threatened with immediate death. New buildings are of great importance to unemployment, trade, and the development of London, and we all wish to promote building rather than discourage it, but, considering the thousands of ugly streets and buildings there are to one good one, it does seem lamentable that the best we have should be attacked in this wholesale manner.

The Adelphi Bill has passed through the House of Lords, largely on the feeling that the Adelphi is private property and a man should be allowed to do what he likes with his own, regardless of history, public opinion, or amenities. Now the Bill is to come before the House of Commons.

The Bill seeks permission to build on the Adelphi Foreground, upon which, at present, no building higher than 20 ft. is permitted and which has, since the beginning of London, been an open-air space. The passing of the Bill means the destruction of the whole block of which Adelphi Terrace is part, as Adam Street, John Street, and Robert Street are all to be widened on the inside of the rectangle. There are several fine houses in London designed by the brothers Adam, but in the Adelphi there are whole streets of their work. On the site of this block, and in front of it, will rise a great building, probably to the height of the Savoy Hotel. The Terrace roadway itself becomes more or less a tunnel " covered by buildings for a distance not exceeding 50 ft. from each end thereof . . . with an unobstructed headway of not less than 20 ft.," and it will have a vent and light shaft in the centre. At the foot of the new building a new road in continuation of Savoy Place will be made. For the purpose of this road the owners of the Estate will take a piece of land from the Embankment Gardens, and give a piece in exchange. But the new road will be of no public value and will connect with no other road unless and until the Westminster City Council and the L.C.C. take a larger portion of the Gardens from the public, and continue the road into either York Buildings or Buckingham Street. If they choose the latter course the situation and amenities of the York Water Gate will suffer considerably. These Councils are elected by the public, but instead of protecting the public gardens for public use, they are considering taking away a portion of the Gardens because, by so doing, they will get increased rates. Of late these Councils have taken considerable care of public amenities, as, for instance, in the case of Abingdon Street and Parliament Square, and it would be a great pity and contrary to their usual policy if they were to sacrifice a part of the Embankment Gardens for the purpose of obtaining increased rates. This new road and the widening of Adam Street, John Street, and Robert Street will be of negligible value to the general public because the roads which connect the Adelphi with the Strand and the Embankment are narrow and already carry as much traffic as possible. Buckingham Street and York Buildings are not wide enough for through traffic, combined with their original purpose of serving their own houses.

The reconstruction of the Adelphi along the lines proposed in the Bill may put money into the pockets of the owners and the Councils, but it will be of little value to the public and will destroy rather than improve the amenities of that section of London. *The Times* is strongly against the Bill, arguing that the Adelphi " happens to be a gem, and a historic gem. Heaps and heaps of money could not compensate for its loss."

The promoters of the Bill have said that the rebuilding of the Adelphi will in no way affect the rebuilding of Charing Cross Bridge. This, surely, is too sweeping a statement. It is true that none of the plans considered by the Advisory Committee proposed a new road through the Adelphi, but it must be remembered that no plan has been decided upon. A new Charing Cross Bridge must come eventually, probably within the next thirty years, and herein lies London's great chance for development, town-planning, and the alleviation in one quarter at any rate of the ever-increasing traffic problem. The erection of a vast building so near the Bridge must influence and hamper future plans by preventing any consideration of road approaches in that direction, and the architecture of the building must influence the scale of the architecture and design of the Bridge, or else be at loggerheads with it. The Adelphi occupies a very important position in regard to that lovely dream, a good Charing Cross Bridge scheme, a piece of London well laid out. If the Adelphi must go, though at present as it is fully occupied and bringing in good money its reconstruction does not seem to be essential, it is imperative that, in the interest of public welfare, amenities, and the development of London, *it should not be rebuilt until after the new Charing Cross Bridge has been settled.*

Those who fight for the preservation of a few beautiful terraces and squares in London, or even the city churches, are no enemies to new buildings and good development. We should probably argue over the merits and demerits of Charing Cross Bridge schemes, but who would raise a hand to prevent the destruction of the present Bridge?

COMPETITION

NEWS

DECORATION OF A CAFE-RESTAURANT

Messrs. Jenson and Nicholson, Ltd., are offering a first prize of fifty guineas and second and third prizes of fifteen and ten guineas, respectively, for a scheme of interior and exterior decoration of a café-restaurant, together with colour schemes and detailed specifications for carrying out the work in its entirety.

The following architects have been appointed assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A., and G. Alan Fortescue, F.R.I.B.A.

Conditions governing the competition, which closes on December 15, 1933, will be issued on September 30 next. Intending competitors, however, should send their names and addresses to the firm at 15, Berners Street, Oxford Street, London, W.1. Entry forms and conditions will then be forwarded in due course.

SOUTHWARK TOWN HALL

Following is an extract from the report of the Special Town Hall Improvements Committee of the Southwark Borough Council, presented at a meeting of the Council held at the Town Hall, Walworth, on Wednesday night.

"After careful deliberation on the matter, we recommend (a) That the Council approve (subject to any necessary consents) of the proposals submitted by Messrs. Yates, Cook and Darbyshire for the erection of municipal buildings on the southern side of the site as indicated on the preliminary plans now exhibited.

(b) That the estimate of the Finance Committee relative to the financial details of the scheme be approved and adopted.

(c) That, subject to the sanction of the London County Council being given to the raising of the necessary loan or loans, the Special Town Hall Improvement Committee be authorized to retain Messrs. Yates, Cook and Darbyshire to act as architects of the scheme provided they invite Mr. C. Cowles-Voysey, F.R.I.B.A., of No. 14 Gray's Inn Square, W.C.1, to act in conjunction with them on the terms and conditions referred to in the agreement of the 12th of September, 1932, or upon his failure so to do, to pay him such proportion of their fees as is therein provided.

(d) That the Special Town Hall Improvement Committee be empowered to take all such steps as may be necessary to give full effect to the foregoing resolutions, and in due course to invite tenders for the erection of the building embraced by the plans referred to for the consideration of the Council, and for any other works incidental to such erection."

Competitions Open

September 1.—Sending-in Day. Proposed Hospital at Surbiton. Assessor: C. E. Elcock, F.R.I.B.A. Premiums: £120, £75, £50 and £25. The conditions, obtainable from A. C. C. Dunn, Hon. Secretary, Surbiton Hospital, St. James's Road, Surbiton, were reviewed in *A.J.* for May 24.

September 11.—Sending-in Day. The Directors of Gidea Park, Ltd., invite designs for five different types of house (ranging from £400 to £900). Assessors: Prof. S. D. Adshead, F.R.I.B.A., A. E. Beresford, F.R.I.B.A., Ald. Ewart G. Culpin, F.R.I.B.A., E. Maxwell Fry, A.R.I.B.A., Howard Robertson, F.R.I.B.A., and W. Harding Thompson, F.R.I.B.A. In addition to being paid a fee according to the scale of charges of the R.I.B.A., the authors of the first five selected designs in each class will be paid a premium of £10. Particulars obtainable from Gidea Park, Ltd., The Estate Office, Hare Street, Gidea Park, Romford, Essex. Deposit 5s.

September 21.—Sending-in Day. Proposed Town Hall for the Borough of Hornsey. Assessor: C. Cowles-Voysey, F.R.I.B.A. Premiums: £350, £250 and £150. Full conditions, etc., were published in our issue for May 17.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere, A.R.I.B.A. Conditions are now being drawn up by the assessor.

Proposed Municipal Offices and Extension to the Library and Electricity Offices for the Metropolitan Borough of Stoke Newington. Conditions have not yet been drawn up.

Development of the Coastguard site, Bexhill. Assessor: T. S. Tait, F.R.I.B.A. Conditions have not yet been drawn up.

R. I. B. A.

ELECTION OF MEMBERS

At a recent Council Meeting of the Institute the following members were elected:—

As HON. CORRESPONDING MEMBER (1): Poelzig: Professor Hans, Dr. ing.h.c.

As FELLOWS (12): Messrs. A. C. Holliday, B.Arch.Liverpool, A.M.T.P.I.; E. P. Lavender; W. G. Ross; T. T. Sawday; P. H. Watson; R. S. Wilshere, M.C., P.A.S.I.; Captain C. M. B. Hinderer, M.C.; F. W. Masey; C. Medley; A. F. B. Paul, M.C.; F. L. Poole; S. Constanduros.

As ASSOCIATES (7): Messrs. N. D. Ayres (Welsh School of Architecture, The Technical College, Cardiff); J. W. Briggs, Dip. Arch. (Leeds), (School of Architecture, Leeds College of Art); J. L. Crowther (School of Architecture, Leeds College of Art); R. Y. Goodden (Architectural Association); J. L. Parkinson (Liverpool School of Architecture, University of Liverpool); Miss C. W. Preston (Architectural Association); R. H. Uren.

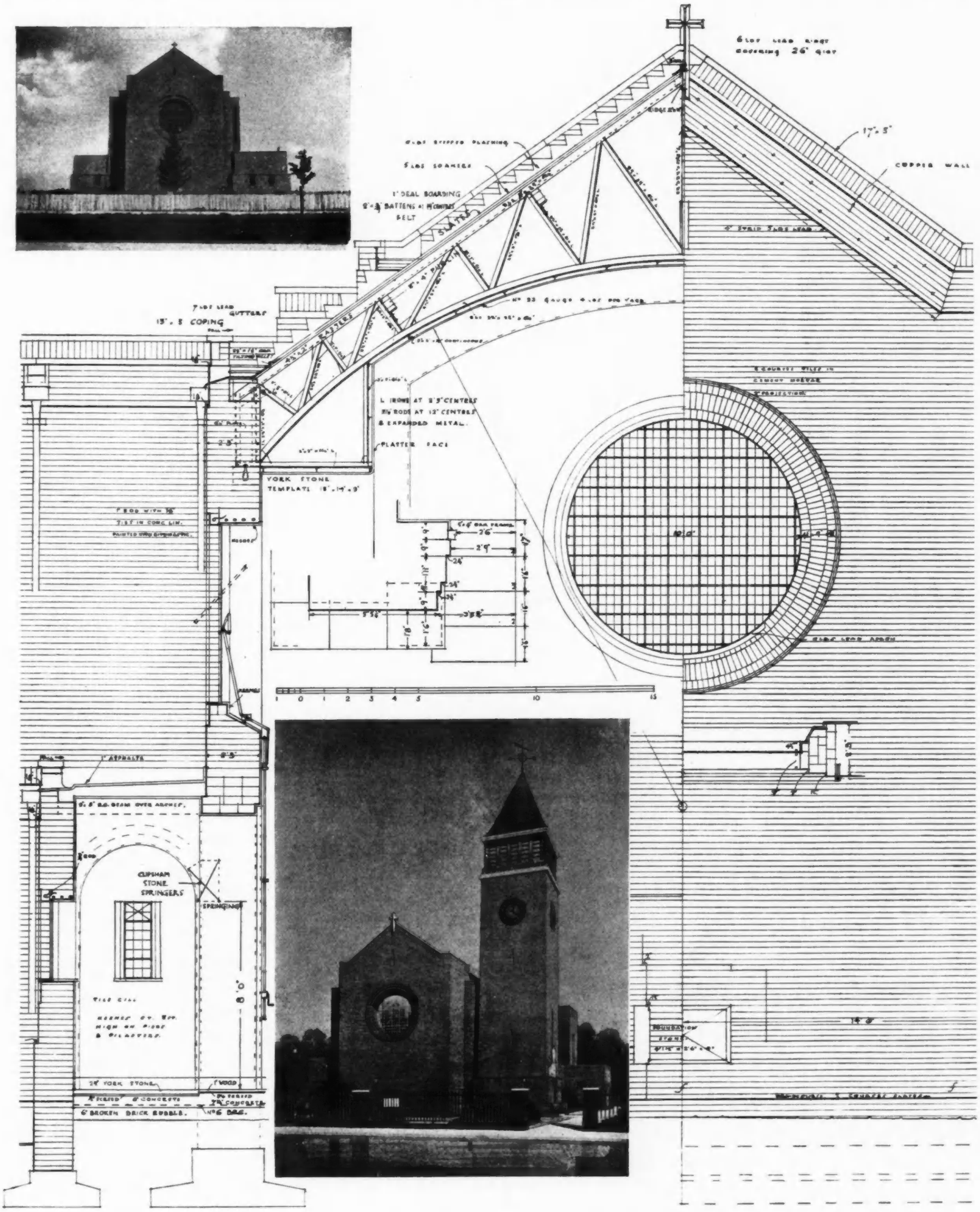
As LICENTIATES (10): Messrs. R. H. T. Bard; D. Bradshaw; H. Cescinsky; R. Coldwell; L. J. Couves; O. W. B. Ellis, P.A.S.I., M.R.SAN.I.; H. S. Malone; J. P. Nelson (Junior); J. Watson; N. B. Wood.

THE INTERMEDIATE EXAMINATION

The Intermediate Examination qualifying for election as Student R.I.B.A. was held in London, Belfast, Edinburgh, Hull, Manchester, Newcastle-upon-Tyne and Plymouth, from May 26 to June 1, 1933. Of the 192 candidates examined 65 passed and 127 were relegated.

The successful candidates are as follows:—Messrs. Atkinson, A. J.; Bearpark, J. R.; Beesley, W. H.; Blackman, M. H. G.; Bloore, D. B.; Bond, C. M.; Brooks, R. S.; Brown, H. K.; Byrom, C. N.; Chambers, E. J.; Clifford, H. D.; Cowing, R.; Dale, B. H.; Dickinson, G. H.; Downing, S.; Ellis, G.; Everson, S. F.; Geers, G. M. J.; George, L. T.; Haigh, E. D.; Hancock, G. A.; Hodgson, E.; Hopkins, T. H. G.; Hopkins, W. A. L.; Horsfield, A. J.; Hughes, A. G.; Ingoldsby, E.; Jackson, J. E.; Jones, E. S.; Judson, H.; Kennedy, T. B.; Lewis, R. K.; Manuel, A. C.; Martin, I. C.; Mason, J. W.; Mort, W. I.; Newton, A. J.; Owen, G. F.; Pidgeon, R. V.; Pitt, H. L.; Potts, A. E.; Richardson, H.; Robertson, A. G.; Saddler, R.; Shearing, A. H. E.; Sidebottom, P. B.; Sinclair, A. G.; Smith, D. J.; Smith, E. D.; Southcombe, J. R.; Stower, F.; Taylor, J. P.; Taylor, J. W.; Thorpe, G. H.; Twydell, G. E.; Warn, S. W.; Wheeldon, C. D.; Williams, J. O.; Wilson, E. P.; Wilson, W. G.; Wilton, D; Woods, E.; Woodward, L. O.; Wynn, W. J.; Young, R. R. R.

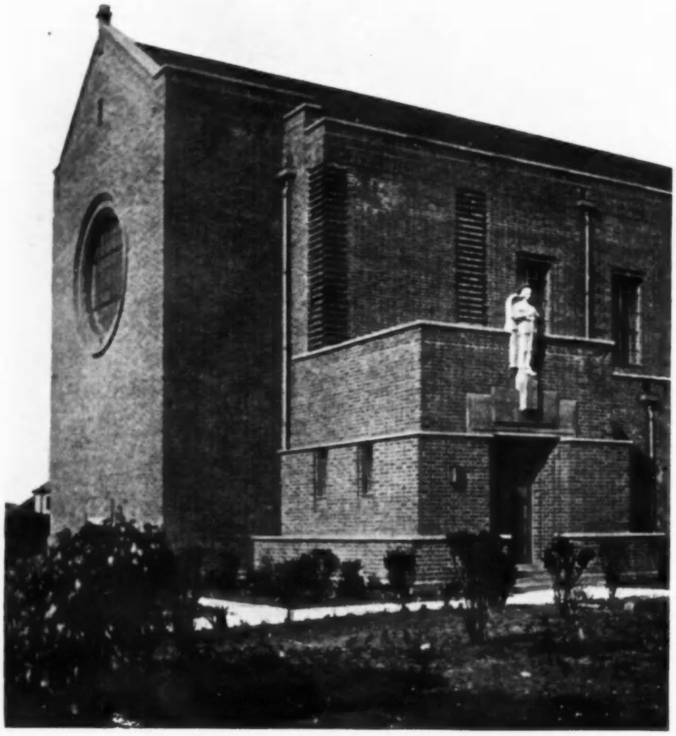
ST. MICHAEL'S CHURCH, TOKYNGTON

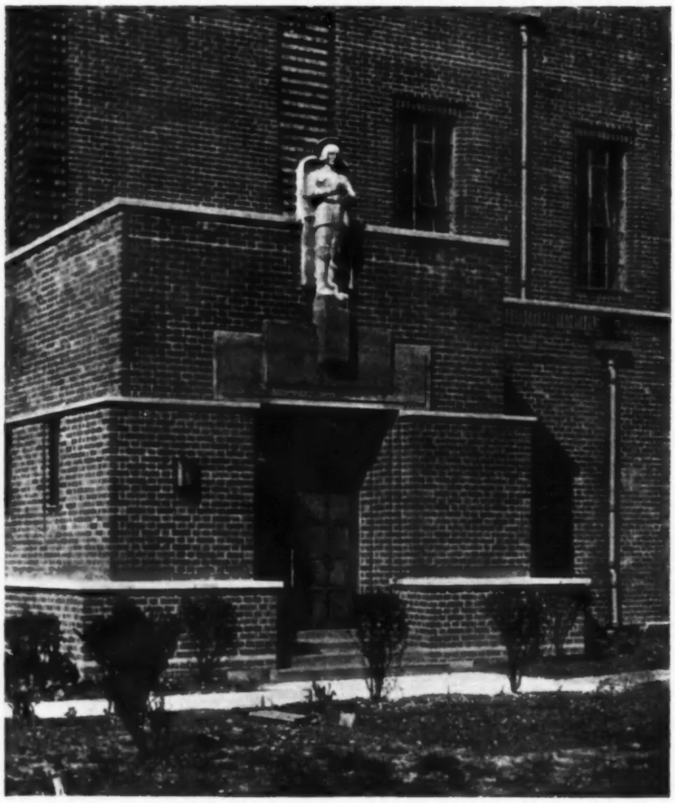

17'.5"
COPPER WALL
1" DEAL BOARDING
BATTENS
FELT
GUTTERS
15" × 5" COPING
L IRONS AT 2'3" CENTRES
RODS AT 12" CENTRES
& EXPANDED METAL
PLASTER FACE
YORK STONE
TEMPLATE
10'0"
1 0 1 2 3 4 5 10 15
ASPHALTE
CLIPSHAM STONE SPRINGERS
SPRINGING
8'0"
YORK STONE
6" BROKEN BRICK RUBBLE
FOUNDATION STONE
14'0"

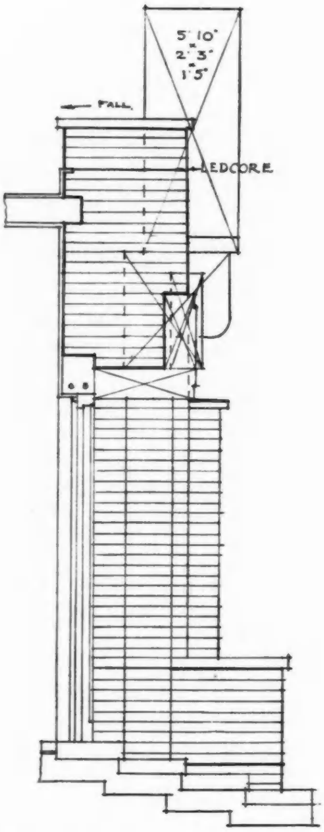
A section through the nave and south aisle; and part elevation of the west front. A photograph is also shown of the church as now built, taken from the west, and a perspective from a similar viewpoint (drawn by the architect) to show the complete scheme.

DESIGNED BY CYRIL A. FAREY

ST. MICHAEL'S CHURCH, TOKYNGTON,







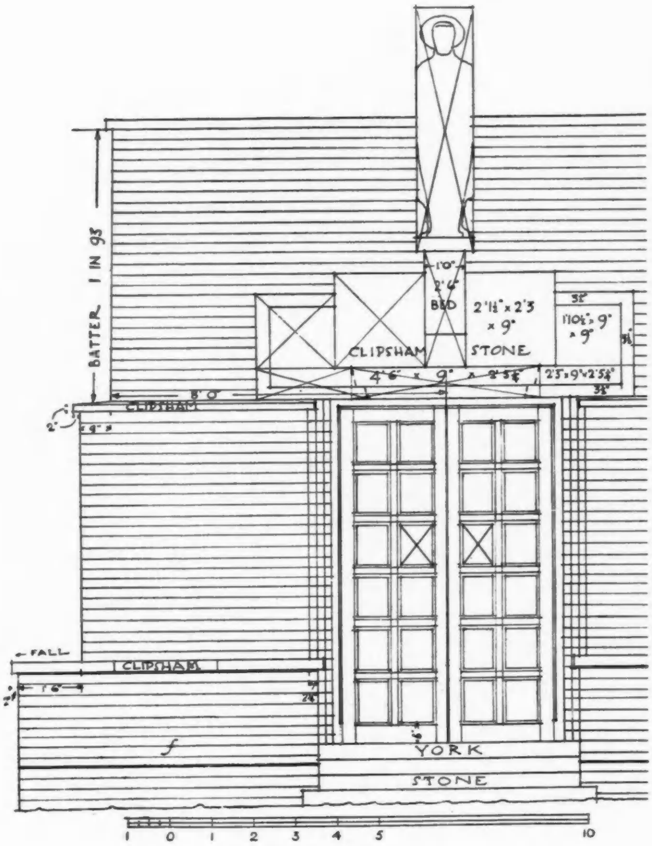
A section through one of the main entrances is shown above and, on the left, a view from the south-west and a closer view of the entrance.

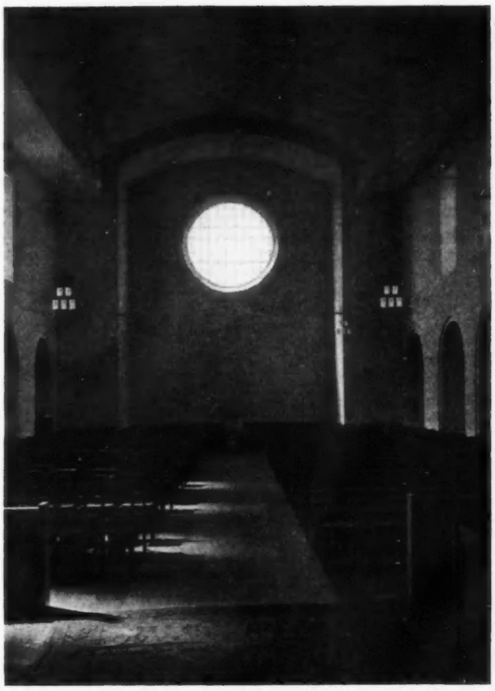
The church is of brick—stocks below ground and Flettons and Chesham facings above, and is plastered internally. The roof is formed with steel trusses carrying a shaped plaster ceiling, and is covered with Portmadoc slates. The aisle roofs are of concrete covered with asphalt. The nave and aisle passages are paved with York stone and the space for seating is laid with wood blocks.

Parts already built: nave, temporary apse, temporary vestries. Parts yet to be built: chancel, morning chapel, vestries and tower.

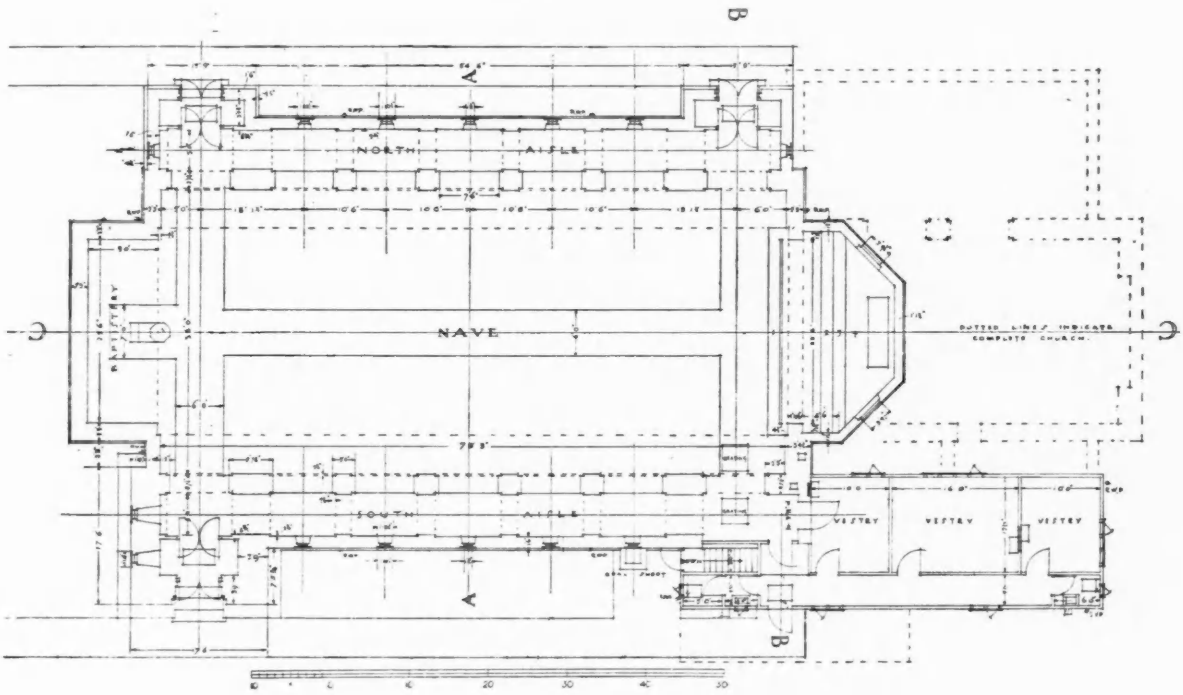
The present accommodation is for 374 persons, and the completed church will hold 534.

MIDDX.: DESIGNED BY CYRIL A. FAREY


1'0"
2'6"
BED
2'1½"×2'3
×9"
1'10½"×9"
×9"
CLIPSHAM
STONE
4'6"×9"×2'5⅞"
2'5×9"×2'5⅞
BATTER 1 IN 93
8'0"
CLIPSHAM
2"
FALL
CLIPSHAM
1'6"
YORK
STONE
1 0 1 2 3 4 5 10



A detail of the south-west door; and a view of the interior looking towards the baptistry. In the plan below, the dotted lines show the portion of the church that, with the tower, is to be completed at a later date, the present east wall and the vestry-block at the south-east angle being only temporary.


B
A
NORTH AISLE
BAPTISTRY
NAVE
DOTTED LINES INDICATE COMPLETE CHURCH.
SOUTH AISLE
VESTRY
VESTRY
VESTRY
COAL SHOOT
A
B
79'3"
54'6"
10 0 10 20 30 40 50

LETTERS
FROM
READERS

ERIC BROWN
ORTHODOX
C. B. WILLCOCKS, F.R.I.B.A.
LILIAN M. ELSLEY
HAROLD TOMLINSON, A.R.I.B.A.
PERCY J. WALDRAM

The B. I. A.

SIR,—May I make one little criticism of the British Industrial Art Exhibition?

In the one place where the organizers had the opportunity of letting visitors handle well-designed articles, that is to say, in the so-called café, no attempt had been made to see that the place was at all seemly, and I had my tea in a barren loft, "furnished" by card tables and folding canvas chairs, and equipped with the most indifferent china and cutlery. In addition, it was provided with ornamental palms and lamp fittings, strongly reminiscent of certain household utensils; and odd pieces of cardboard here and there dotted the walls with various legends.

Surely——! ERIC BROWN

Architecture as a Trade

Sir,—I enjoyed Iconoclast's reply to me in last week's JOURNAL. But really he evaded both my points. I did not say that in pre-school days the Associates did *not* possess "experienced competence." I said that passing the Associateship examination was not in *itself* "a mark of experienced competence." That is a plain fact. It was possible in those days for a man to pass the examination with a purely academic training. The fact that many of those who passed it had also a good deal of practical experience is beside the point. They need not have had it, and A.R.I.B.A. did not imply that they had it.

Again, on the provincial representation point, he said that the R.I.B.A. was "primarily a club of London architects" and that the Council contained only a "small provincial minority." People were saying that with some truth twenty years ago, but it is ludicrously wide of the mark today. Ask any experienced and level-headed provincial man on the Council of 1933.

Iconoclast tries to justify this "small minority" by not counting any provincial representatives except the ex-officio representatives of the Allied Societies. Even with this limitation he is wrong. Twenty-nine is not a "small minority." It is quite a big minority.

But in not counting the other provincial members he falls into a logical fallacy. A London architect who owes his seat to the votes of a majority of provincial voters is a London representative in his eyes. A provincial architect who owes his seat to the votes of a majority of provincial voters is not to be counted as a provincial representative. Really!

As to an Allied Society Councillor having "frequently" to decide at short notice upon far-reaching schemes which he has not previously had an opportunity of considering, I can only say "What are these schemes?" I know of none. A complaint more often heard is that so much time is consumed in giving the Allied Societies the opportunity to discuss and criticize new proposals that it is a very slow business to get any new proposal through. I seem to have heard of a revised Scale of Charges which has been more than six years under consideration, and I am told that the delay has been chiefly due to constant consultation with, and reference back to, the Allied Societies.

I may be wrong, but I should like to know what concrete facts his complaint is based upon.

Mr. Martin-Kaye, who wrote in support of Iconoclast's views, is, as we all know, an unworldly person with high ideals. I expect he does not know that the voting in the R.I.B.A. Council election and the interest taken in it compare very favourably with almost every other professional institution in the country. He thinks that "every individual provincial member" would vote for a direct representative!

I find in the Kalendar no fewer than 24 directly elected provincial representatives from England, Scotland, Wales and Northern Ireland. Mr. Martin-Kaye must live in a private Utopia of his own if he imagines that these 24 local representatives, "sent or elected with the distinct mission of representing the provincial element," are elected by the votes of the majority of the members of the Societies they represent.

The fact is, of course, that in many areas the mass of members take no interest whatever in the election and are content to leave it to their Councils. For the most part they will not even attend the meetings at which the election takes place. ORTHODOX

The Adventure of Building

SIR,—I was very interested in your review of the new edition of *The Adventure of Building*. If this book is widely read it will undoubtedly have considerable influence in preventing the erection of unsightly buildings.

The example of the Berks., Bucks. and Oxon. Architectural Association and the Halifax Building Society in distributing large numbers of the book will, it is hoped, be followed with enthusiasm by other Architectural Associations and Building Societies so that *The Adventure* may be brought to the notice of as many as possible of the large class who form the majority of speculating builders' customers.

C. B. WILLCOCKS

Slum

SIR,—I should like to offer my sincere congratulations on your "Slum" cover! You just *have* to sit up and take notice. The whole lay-out and style are worthy of the really interesting contents.

By the way, I was unaware the head-piece on the usual cover of the JOURNAL was that of Inigo Jones, until I read the title you gave my letter in your issue for May 24. I certainly did not recognize it from the painting of him in the National Portrait Gallery.

LILIAN M. ELSLEY

School of Pathology, Cambridge

SIR,—I regret that a misprint in my article, which appeared on June 15, misrepresented the facts concerning Mr. Edward Warren's buildings at Oxford and Cambridge. "Presence" should have read "absence." The misprint passed my notice in proofs which were corrected over the telephone on account of the urgency of the matter.

HAROLD TOMLINSON

The Design of Hospital Wards

SIR,—The R.I.B.A. report on the Orientation of Buildings was, on its first appearance, severely criticized for daring to question the perfection of the conventional design of hospital wards, and for advancing comparative data of the amount of possible sunshine which it admits to patients' beds as compared with the new "veranda" type of ward.

The current issue of *The Lancet* (June 24, p. 1351) devotes its leading article to the report. After referring to the illustrated contribution of M. de la Rivière to the International Hospital Association on light and air in hospitals (copies of which should be a useful addition to architectural libraries), it concludes with these words: ". . . till recently hospital planning had with few exceptions become standardized into the familiar ward with its long axis running north and south, with windows on each side facing east and west between beds placed at right angles to the external walls. That type of hospital is now doomed, will never be repeated, and may, we hope, be pulled down or altered as rapidly as funds will permit." PERCY J. WALDRAM

THE CHICAGO WORLD FAIR

[*BY FRANK LLOYD WRIGHT*]

TO see the Chicago "Progress" Fair of 1933 is to remember its original, the Columbian Fair of 1893, and to realize how much better the Columbian Fair was in every respect, as an eclecticism—even as novelty. At the Columbian Fair the provincials of the United States saw for the first time architecture as co-ordination on the grand scale. Thrilled by its orchestral effects, the provinces, aided by the group of eclectics responsible for the ensemble, went heavily "pseudo" — and imagined they went "classic."

There was some excuse for their debauch of sanity by way of academic taste, because they yet knew nothing of the scientific organism of architecture. The building, to them, was a picture. The pictorial, in any form, was the art they knew. They were Victorian. And there was much to be said for the eclecticism of 1893 as a picture for the United States. The architecture of the Fair became epidemic; and, five times since, the same thing has broken out in various parts of the country, modified somewhat each time, but the thought wholly unchanged.

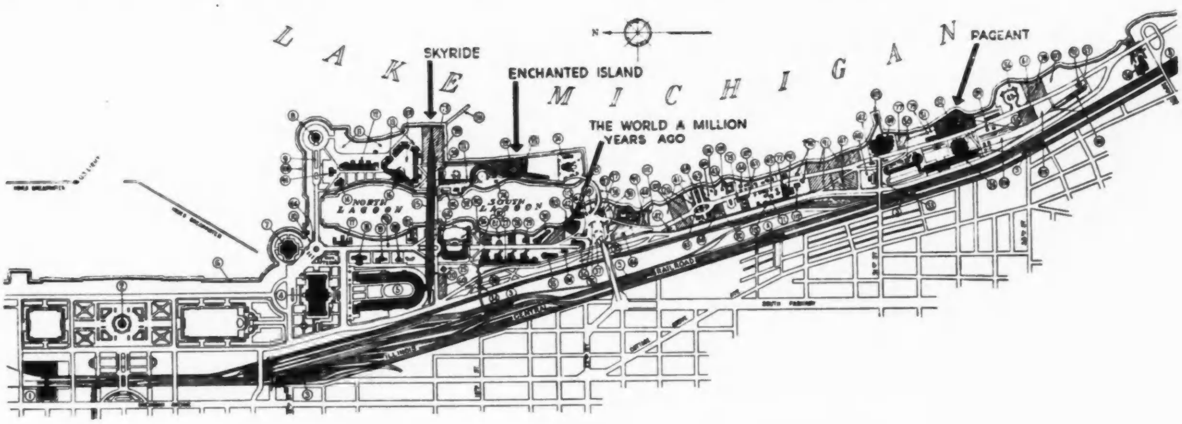
There was only retrogression in the repetition, and each was confessed a failure. No progress.

Came 1930. The Dawes family of Chicago counted it time to go to another Fair, and called up by telephone several eclectics they considered prominent, and nominated them to choose others of their kind, all together to finally lay out a scheme for a Fair to celebrate progress in honour of the City of Chicago. There was hope of profit to Chicago business and of increased prestige—estimated also as profit.

Chicago had not yet recovered from the blaze of glory in which she found herself in '93, and which had been emulated on the grand scale by rival St. Louis, by distant San Francisco and San Diego, and by several other ambitious Usonian cities.

But progress, a dubious matter at best, is difficult to celebrate. And the chief failure of the Fair lies in this choice of the "progress-motif" for 1933 celebration. They might have called the thing anything else! But Chicago was vainglorious owing to past triumphs and the cliché, serving so faithfully and so ill so many, too many times already—that is to say, the lagoon with several miles of temporary picture buildings, dedicated to various industries wrapped around it, the fountain still at one end of it, the buildings named for the various industries they were intended to advertise by æsthetic inference and to exploit by façade, in short, the same Victorian idea that made the Columbian Fair—was taken out, dusted off and adopted complete. But, then, a pause. What progress? As I happen to know, this question threw the designers of the Fair into temporary confusion, for progress must be evident in a Fair celebrating Progress? Well then, what progress?

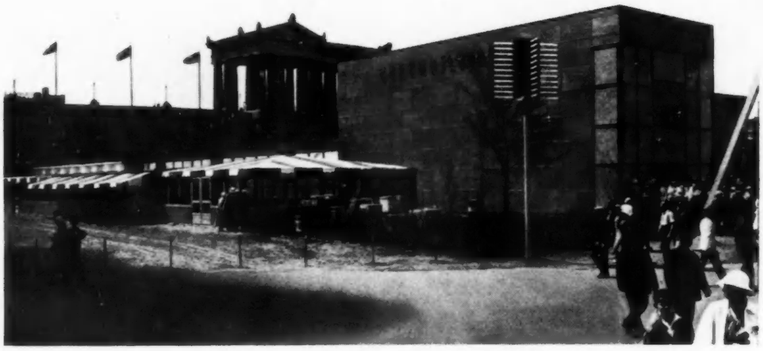
At the French Fair of 1925 a new appearance had been seen. The appearance resembled to a startling degree some work that was indigenous



PLAN OF THE CHICAGO EXHIBITION

1.	*Art Institute*
2.	*Buckingham Fountain*
3.	*Illinois Central Stations*
4.	*Field Museum*
5.	*Soldier Field*
6.	*Amphibian Ramp*
7.	*Shedd Aquarium*
8.	*Adler Planetarium*
9.	*Terrazzo Promenade*
10.	*North Entrance*
11.	*Bathing Beach*
12.	*Agricultural Group*
13.	*States Building*
14.	*Century Dairy Exh. Inc.*
15.	*Science Bridge*
16.	*U.S. Government Building*
17.	*Administration Building*
18.	*Sears Roebuck Building*
19.	*Illinois Host Building*
20.	*Skyway & Observation Tower*
21.	*Electrical Group*
22.	*Enchanted Island for Children*
23.	*Horticultural Group*
24.	*Hollywood*
25.	*Lama Temple*
26.	*Hall of Science*
27.	*General Exhibits Group*
28.	*Christian Science Publication Society*
29.	*Blue Ribbon Restaurant*
30.	*Hall of Religion*
32.	*Edison Memorial*
33.	*18th Street Bus Terminal*
34.	*18th Street Entrance*
35.	*American Radiator*
36.	*Firestone Building*
37.	*23rd Street Entrance*
38.	*23rd Street Bridge*
39.	*Streets of Paris*
40.	*Old Heidelberg Inn*
41.	*Midway*
42.	*Crown Food Co.*
43.	*Fort Dearborn*
44.	*Lincoln Group*
45.	*Home and Industrial Arts*
46.	*Restaurant—Eitel Inc.*
47.	*American Indian Village*
48.	*Mayan Temple*
49.	*General Motors Building*
50.	*Chrysler Building*
51.	*Tracks for Pageant of Transportation*
52.	*Grandstand and Stage Pageant of Transportation*
53.	*31st Street Entrance*
54.	*Travel and Transport Building*
55.	*T. & T. Tracks and Exhibit Space*
56.	*Goodyear Field*
57.	*South Entrance*
58.	*Pumping Station*
59.	*Hall of Social Science*
60.	*Japanese Pavilion*
61.	*Poultry Show*
62.	*Walgreen Co.*
63.	*Maynes-Illions Rides*
64.	*Flying Turns*
65.	*African Dips*
66.	*Shooting Gallery*
67.	*Semindle Indian Village*
68.	*Captive Balloon*
69.	*Doughnut Machine Corp.*
70.	*Edwards Rancho*
71.	*Victor Vienna Café*
72.	*Home Planning Hall*
73.	*Picnic Grounds*
74.	*Concession Kiosk*
75.	*Fort Dearborn Massacre Building*
76.	*Concession Group*
77.	*Pal-Waukee Airport*
78.	*All-Africa Group*
79.	*Air Show Inc.*
80.	*Laff-in-the-Dark*
81.	*Concession Pergola*
82.	*Time and Fortune Magazine Pavilion*
83.	*"City of New York," Byrd's Ship*
84.	*Sinclair Prehistoric Exhibit*
85.	*Italian Pavilion*
86.	*Belgium*
87.	*Morocco*
88.	*Swedish Pavilion*
89.	*Whiting and Nash Motors Building*
90.	*Gas Industry Hall*
91.	*Army Encampment*
92.	*Greyhound Service Exhibit*
93.	*Avenue of Flags*
94.	*Polish Pavilion*
95.	*Haroline Thermometer Tower*
96.	*The Hub-Lytton*
97.	*Baby Incubator*
98.	*General Cigars*
99.	*Foreign Bazaar*
100.	*Oriental Village*
101.	*De Saible Cabin*
102.	*Marquette Cabin*
103.	*31st Street Boat Landing*
104.	*Machinery Demonstration Area*
105.	*Days of '49*
106.	*Receiving Depot*
107.	*Wild West Show*
108.	*Planetarium Boat Landing*
109.	*Court of States*
110.	*Motor Boat Show*
111.	*23rd Street Motor Boat Landing*
112.	*Cyclone Roller Coaster*
113.	*The World 1,000,000 Years Ago*
114.	*Dance Ship*
115.	*Johns Manville Co.*
116.	*Columbus Memorial Light*
117.	*W. & J. Sloane Building*

AT THE WORLD



THE OLD AND THE NEW—

The above photograph illustrates Mr. Frank Lloyd Wright's comparison of the spirit of the 1893 Chicago Exhibition with that of the present one. In the background is seen a survival from the period when Americans, as Mr. Frank Lloyd Wright says, "went heavily 'pseudo'—and imagined they went 'classic'"; while the building in the foreground—the Czechoslovakian Pavilion—and even more, the Hall of Science shown opposite, are typical of the manner of the 1933 Exhibition. "Change is not necessarily progress."

to the United States. But that indigenous work was not well known in its own country, and being done some quarter of a century ago, might be disregarded—though still living—and become a fresh appearance with a view to indicating progress to the country at large. Any fresh appearance might be taken by the people for progress? As for the tyro and the fashion, France had endorsed the new appearance, and there was an increasing wave of appreciation from Middle-Europe. Why not seize it and name it Progress? Once an eclectic, always eclectic: so it was done.

And came another thought: the Columbian Fair, with one outstanding polychromatic exception, had been in the white. "Let's paint this one in gay colours like the solitary outstanding exception at the Columbian Fair." It was done. More progress.

The new appearance was characterized by the long horizontal line and the extended flat plane, both broken as little as possible. Originally the straight line and flat plane had been seen in the obscure indigenous architecture—now the skeleton in the closet—as a means to an end: the sincere use of the machine as a new tool in building and the development of an organic architecture for our country. The original had been a faithful development of structure. The effects were honest, clean, bold and striking, by way of elimination of the insignificant and affirmation of structural principles. They were as distinctive in style as the Gothic, the Greek, or the Indian. But, being themselves specialists in the various styles, it was a simple enough matter for the Dawes group of eclectics to take on overnight one more speciality as the latest style. This was easy because the art of building was, to them, merely getting something in some style set up. No need to change the thought. That would be impossible, anyway, because an eclectic must not really think. He must run the outside on the thing somehow, simulating the outlines, surfaces and contrasts. These new effects could all be simulated by leaving the familiar pseudo-classic plan-structure where and as they understood it—and arriving at the elevations by scraping off capitals, cornices, pilasters and ornamental detail. By omitting all window openings less interruption of flat effects could be had; but, as may be seen, although the buildings did shut their eyes, the countenance they had taken on could not fail to be recognized?

The net result: Ideas? None. Scheme? Bad! Messy and commonplace, even from their own standpoint. Features? Commonplace repetition in the glare of publicity of effects now merely superficial that had already appeared in out-of-the-way places as genuine. Style? Faked again. On the whole, here was constructed decoration in the new quarter-century-old mode.

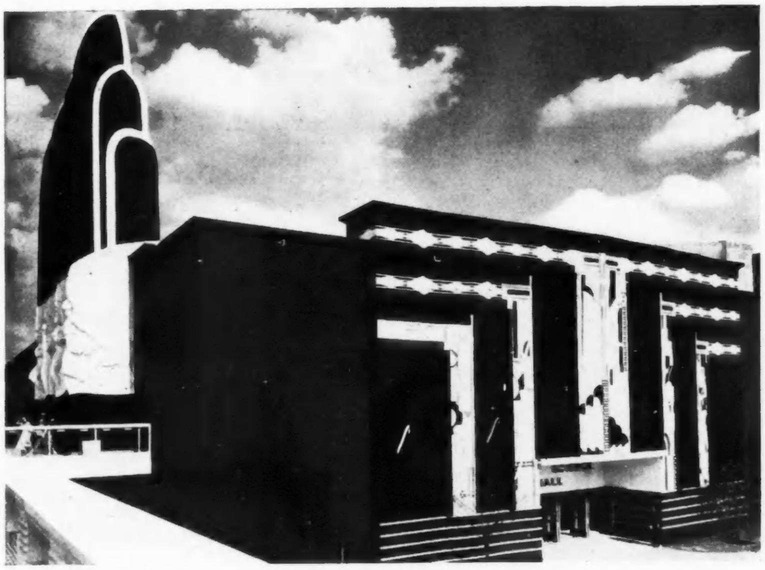
"Changed" is not necessarily "progress," and here comes no reality as "progress." Here is only fanciful change: the black and white poster of 1893, republished in the same old vein, but coloured now in 1933. In some few effects a fetching poster—but when the effects are good they are not new, and when they are new they are not good. They are not good because they are merely superficial imitation of something not understood. Here is a desperate and depressing attempt to visualize progress in architecture by rejecting the old not as *honour* to dead or dying tradition, but rejection as *insult* to a living tradition by patterning after a new appearance that can only be a seeming to the patterners. Of what it is that originally appeared this Fair knows nothing, and cares less.

It is the privilege of any architect to inebriate himself at a Fair. And it is well to remember that any one of the architects who set up this apparition could as well set it up Gothic, or turn it over to pseudo-classic or make it go Chinese. And all would have much preferred to do any of these things had they not seen the handwriting on the wall: "the old styles at the end of their tether." So the same lack of respect for tradition now characterizes this "Progress" effort in their hands that has heretofore characterized any effort to work in any style. The same insincerity damns the work for any future reference except as an eclectic's latest scrap-pile to add to those already known as "Americana."

No architect really understanding good work will copy that work nor trade in it, nor will he act on its appearances. Understanding should, and would, make him master of his own work. This ambitious show as a whole, would, if it could, betray a hope belonging by nature to those whose deeper understanding of life an organic architecture expresses.

By premature, but habitual, exploitation, here is the betrayal of an organic architecture for our country to make a Dawes holiday for a people already bought and sold way beyond their own generation or the next. Yes, or the next. The cause of an organic architecture as a living tradition is here betrayed just as the same old eclecticism has betrayed the dying Gothic tradition, and as it has betrayed the dead pseudo-classic. It

FAIR, CHICAGO



THE BETRAYAL OF AN ORGANIC ARCHITECTURE

The Hall of Science building at the Chicago Exhibition, in the style that Mr. Frank Lloyd Wright condemns as the product of the same eclecticism that produced the historical stylism from which this exhibition claims to break away—" the expedient eclecticism of unfair architects sold by ballyhoo to the public in the name of progress." There is one consolation : " Let's suppose that demand for the modernistic becomes even more department-store popular than it already is. It will automatically be damned the quicker."

could not wholly betray the Rennaisance because the Rennaisance itself, where architecture was concerned, was a self-betrayal. So here to make the newest Roman holiday—a " Fair " —you may see the deeper and more profound work that is indigenous to their own country betrayed by way of its own countenance, used as a mask by the expedient eclecticism of unfair architects and sold by ballyhoo to the public in the name of " Progress."

What consequences ?

Well, let's admit that the departure in itself may help to break the fixture in the popular mind of epidemic classic and " the periods." Let's suppose that demand for the modernistic becomes even more department-store popular than it already is. It will automatically be damned the quicker.

At any rate, the camp of the eclectics will be badly broken up if not stampeded.

I see no such effect upon the more fair-jaded public of today as was produced by the original Fair. An unhappy people at a despondent period may welcome diversion. But in the confusion resulting from the division in the eclectics' camp the people may see the refreshing values of simplicity —simple surface and the single line singularly significant—and be moved—the better among them—to go deeper into the causes of these " new " effects. Architecture can't be made to grow much by ballyhoo or propaganda unless in this way.

Let's forgive the expediency of these shallow architects for their exploitation of appearances belonging by nature to work deeper than their understanding. Let's say these men did the best they knew how to do with their newest eclecticism.

But the fact remains that the whole as architecture is false. It is not architecture, however gaily painted.

And what is false is more than likely to be damned when the excitement is all over.

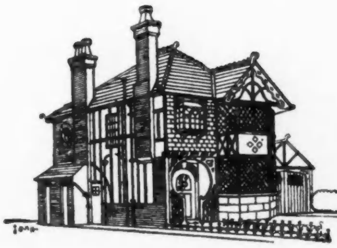
●

BUILDING CENTRE COTTAGES, ALDWYCH, AND HOUSING EXHIBITION

Owing to sustained interest and in response to many requests from the provinces, it has been decided to retain the Demonstration Cottages erected on the Aldwych site, Strand, and to continue the Housing Exhibition at present being held at the Building Centre, 158 Bond Street, until July 29.

As a consequence of the competition of which these cottages are the result, similar cottages are being erected in various parts of the country by local authorities and private land owners.

WHAT IS TO BE DONE ABOUT



THIS?

*[In the following article Mr. N. Martin-Kaye describes how the Essex, Cambridge and Hertfordshire Society of Architects (of which he is the Secretary) proposes to tackle, in co-operation with the Eastern Federation of Building Trades Employers, the question of speculative building. A list of the previous articles in this series was published in our last issue.—*ED., *A. J.]*

14. An Essay in Co-operation

[*By N. MARTIN-KAYE*]

WHAT is to be done about this ? Very little at the moment, and certainly nothing by the architects working *alone*. Let us be quite clear on this last point ; because if we labour under any other impression it is useless to continue the discussion. If architects imagine that they can dictate to the speculative builder in his own province then the only thing is to consider the following simile : If somebody walks into our house and says, " I do not like this ; you could and must improve that—your taste is abominable—your plan and arrangements all wrong," we curse his impertinence and show him the door.

In the JOURNAL, a series of articles has appeared purporting to do precisely the same thing—viz., telling the speculative builder that his houses are terrible, his taste execrable, and piling abuse on a man who is—What is he doing ? Well, he is simply earning his living by building his own houses (incidentally from plans supplied by architects, although they will not admit it) on his own land, giving the public what it wants and minding his own business. Is there anything very terrible in that ?

Before going any further, in fairness one would state that, although the architect supplies the plans, he is not given a chance to do anything else, and the speculative builder does what he likes with the plans and elevations, etc. Why the architect lays his brains open to such abuse is difficult to understand—but this is another subject.

However, the speculative builder gets on with the work, whereas architects sit on the fence and shout "You should not want this! You should have that," and supplement their shouts by pamphlets, articles and books galore. The speculative builder pays no attention and the public still less. Why should they? The public demand and the speculative builder supplies; and there is the end of it. Let us remember that architecture and building are *not* the monopoly of the architect.

All the foregoing is very plain speech and makes unpalatable reading. That cannot be helped, because, if there is anything to be done, we must first of all come down to earth and recognize the irrefutable facts. It should not be assumed that I am condoning the offences of the speculative builder. Far from it. But it is imperative to preface any serious consideration of this problem with an emphatic warning.

Once realized, we can ask again, sanely: "What is to be done about this?" I repeat, very little at the moment, for no remedy will be immediate in its results and it is a difficult problem. There are, however, three ways of starting the ball rolling:

(1) Collective advertising by the R.I.B.A.

(2) Co-operation between architect and builder.

(3) Example.

The main concern of this article is with (2), namely, to describe how the Essex, Cambridge and Hertfordshire Society of Architects proposes to tackle the question in co-operation with the Eastern Federation of Building Trades Employers. But let us take the first method.

If collective advertising is undertaken by the R.I.B.A., and its aims and objects as an Institute are continually set before the public, who are professedly ignorant in the daily press (not *The Times*, *Telegraph* or *Morning Post*) by well-chosen announcements, the public may wake up to the fact that it would be preferable to employ an architect; and the speculative builder, seeing an attack on his own advertising field, would either employ or consult an architect member of the R.I.B.A.

The third method is example. The writer would like to see every Allied Society of the R.I.B.A. start a utility society in its own area, run by its Council in Committee or Panel. Having bought an estate, it should be properly laid out, with portions allocated to each investing member, who would then erect, with the assistance of a builder or by direct labour, houses from his own designs—the estate to be a working model and example. But no; we are throttled by the Professional Code against this third method.

Example by booklets or pamphlets is no good whatever, for the simple reason that it is *dictating* again.

The second method is by co-operation. Now some people will say that if you touch pitch you must expect to get contaminated. Who says it is pitch—speculative building? Only architects; nobody else, remember. The public does not think so, nor the speculative builder. But even if we architects have a gospel—and we have a glorious one in the true tenets and sound canonical principles of good design—surely it is our duty to preach it by example and co-operation if we believe in it at all.

We shall certainly not get very far with our present attitude of shouting from the fence and practically genuflecting and thanking Heaven we are not like these horrid people. And if our belief in our art is true and sincere, why permit its defilement throughout the breadth of the land? It is as well to remember that although the purpose of these articles is to show how we may retrieve some of the work that has been taken from us by speculative builders, architecture is suffering as well as architects. If the situation cannot be controlled from Conduit Street then it can only be done by co-operation between architect and builder.

The architect alone does not appear to be able to supply the goods. He may provide the plan, but no speculative builder ever works to an architect's specification. A scheme for combating bad design was put before a joint conference of the Essex, Cambridge and Hertfordshire Society of Architects and the Eastern Federation of Building Trades Employers recently, and referred to a joint consultative committee for fuller consideration in detail. It was received very favourably by the conference, for it should be remembered that builders who respect their ancient craft and all that good craftsmanship and building implies are just as much alive as architects to the necessity for improving design.

It was suggested that a competition should be held within the area and that designs should be invited from architects and builders for the erection of houses, either detached or semi-detached, on anything but an ideal site (competitions of this nature are generally and erroneously framed to fit ideal conditions rarely met with in practice).

Following are extracts from the proposed conditions: The site to be 25-30 feet frontage by 100 feet depth or thereabouts. The plans and elevations to be prepared by an architect but the drawings to be accompanied by a builder's specification, quantities, statement of labour and profit. The drawings submitted to be one-eighth inch scale working drawings on linen under conjoint authorship. A premium of £50 to be awarded to the best design and particulars, the cost of the premium to be met by the Society and Federation in equal portions. This amount may be increased, but at this stage nothing has yet been definitely settled. Then in addition to the first premiated design 6-10 further sets of designs to be placed in order of merit.

The competition to be judged by a jury consisting of a proportionate number of architects, builders and laymen (not prominent laymen, but drawn from that class who may be reasonably expected to live in the type of house submitted). On adjudication, the successful plans to be exhibited and the elevations only to be published in the professional press and the lay press of the area. The drawings to be kept in the office either of the Federation or the Society and to be available to any speculative builder who desires to make use of them. The applicant would be expected to pay a fee to cover the cost of prints from the linen tracings, copies of the specifications and particulars, and the fees for the architect. This cost would be kept down to a reasonable amount. The architect designer would prepare, at an extra fee, the necessary adjustments and site plans for deposit with the local authorities.

The competition is more or less *sub judice* and the conditions are by no means free from defects, but when the joint committee gets to work they will be examined from every angle. It will be seen that in essence it is a conjoint and co-operative effort to solve a difficult problem—one that must be tackled soon in view of the new Town Planning Act. Some examples of good design and efficient housing must be provided, and these can only be obtained by mutual examination of the problems by both designer and builder. A competition of this nature, or on similar lines, undertaken in every area of the country suffering from the depredations of the speculative builder, would be infinitely preferable to the niggardly methods of advisory panels. Although operating with some measure of success in certain areas, panels are by no means universal, and, from the professional point of view, savour strongly of dictation in preference to diplomatic leadership and co-operation.

In conclusion, there is no doubt that such a scheme will be looked at askance in some quarters. The writer is prepared to admit that the scheme has many imperfections, which will, it is hoped, be cleared away on examination, but at the same time, it is not dictation, neither does it involve any loss of prestige for the architect.

One point further. Although designer and builder may meet together for this purpose, we need the co-operation of finance, the greatest weapon of all, and that of the building societies. Without the building societies the speculative builder could not exist.

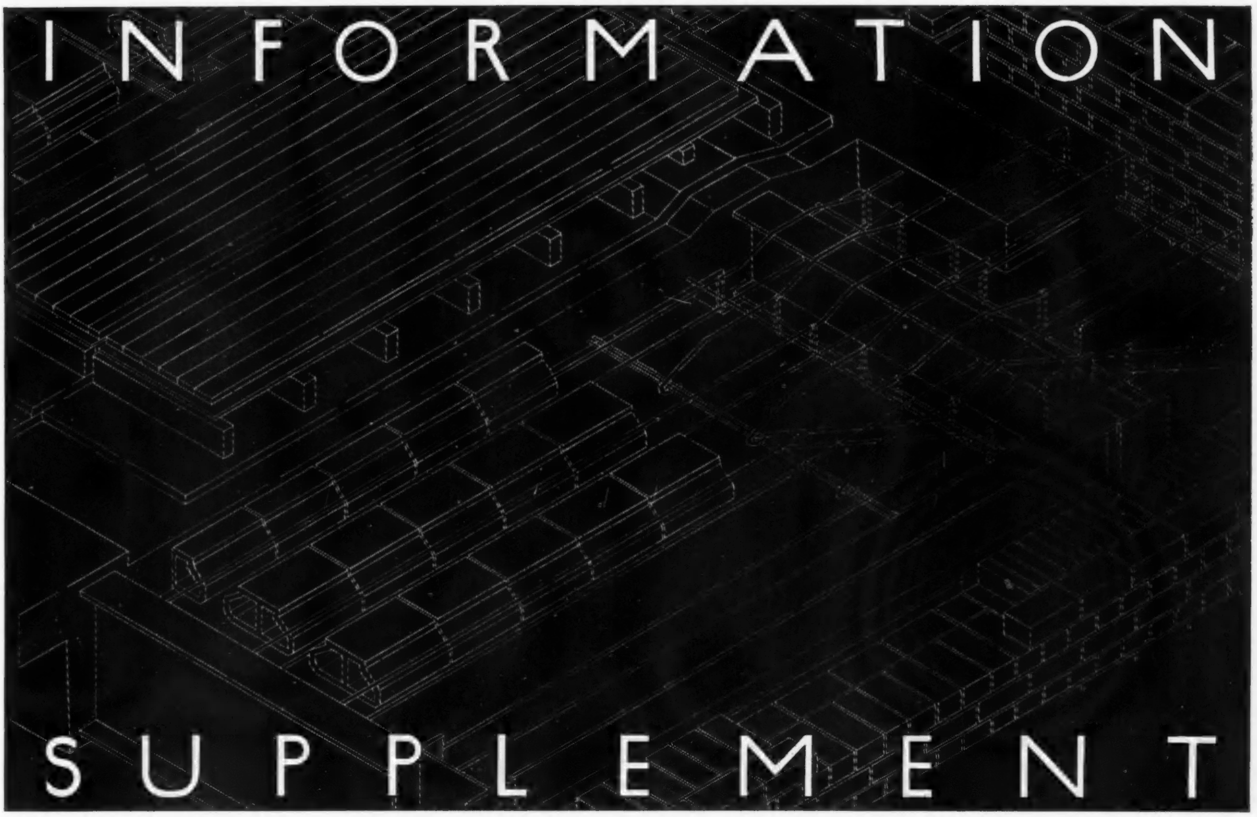
Why should a building society care about æsthetics so long as the building upon which a loan is effected will stand up for the period of the loan? That is all that it is concerned with. What happens after does not matter. But why assume that building societies and their directors are indifferent to good design? Their co-operation is vital, and it must be asked for by the profession with *some definite proposition.* One wonders whether, in the struggle for the incorporation of vital æsthetic considerations in the new Town Planning Act, such as control of elevations, etc., sight was lost of the fact that the power behind all possible abuses, perpetrated by those against which the Act is directed, was finance and the controllers of this finance, the building societies?

EASY TERMS
PLANS APPROVED

HOUSES AT GIDEA PARK

An alteration is announced in the conditions of this competition (see Competition Page), throwing it open to *all architects of British Nationality.*

INFORMATION SUPPLEMENT



RECENT DEVELOPMENTS IN STRUCTURE

BY W. E. J. BUDGEN, B.Sc., A.M.I.C.E., A.I.Struct.E.

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[*Information on building methods, materials and equipment is generally so scattered that the process of reference absorbs much valuable time.*

The Information Sheets, which have been published every week since the beginning of the year, provide, in accessible form, the vital information on given subjects. It must be remembered, however, that whilst certain subjects may be treated diagrammatically on a single sheet, others are better presented as illustrated articles. We have therefore decided to publish at regular intervals a series of Information Supplements. This, the first, deals with structure; but, since the field of structure is wide, we have confined ourselves here to recent developments in so far as they affect the architect.—ED., *A.J.*]

BUILDING REGULATIONS

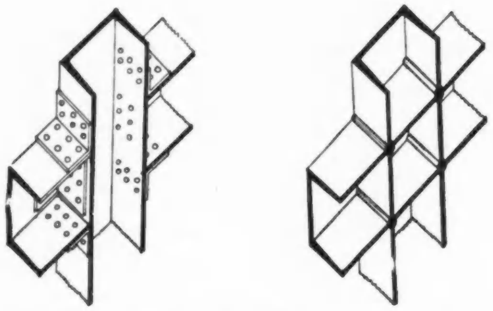
THE use of the "frame" has not found favour with English architects as it has with architects abroad, particularly in the case of small buildings. No doubt this is partly due to the fact that architects are not always in sufficiently close touch with engineers to take advantage of the latest structural developments, but the backwardness is also largely due to hampering regulations, many of which remain from the days of the solid wall. In London, as is well known, the erection of buildings is controlled by the London Building Act of 1930. Under Section 58 of this Act, steel frame buildings are allowed, provided they comply with the provisions of the Third Schedule of the Act (which is merely a reprint of the 1909 "Steel Frame Act," and is quite out of date), while reinforced concrete construction is allowed subject to its complying with certain regulations (mostly passed in 1914 and also quite out of date). Instead of bringing these regulations up to date, the L.C.C. have obtained power (which power is embodied in the 1930 Act) to "waive" the majority of the provisions (i.e., to permit stresses or loads, for example, which are not allowed in the original regulations). For reinforced concrete there is no published guide to the "waivers" that may be obtained—an engineer who wishes to work to higher stresses than those specified in the regultions must apply to the L.C.C. He has no guarantee as to the concessions he will obtain until he receives an official reply—which may take a month. The position with regard to steel frame construction is similar, but the L.C.C., in 1932, approved the "Code of Practice," as the "basis for consideration of applications under Section 58 of the London Building Act, 1930, for relief from the provisions of the Third Schedule to the Act."

This "Code of Practice" first appeared in the First Report of the Steel Structures

Research Committee, a committee appointed in 1929 to " review present methods and regulations for the design of steel structures . . . to make recommendations for the translation into practice of such of the results as would appear to lead to more efficient and economical design." It has subsequently been issued, in a slightly amended form, as a British Standard Specification. It is the considered opinion of the leading engineers of the day, yet it is not legal to erect a building in accordance with its findings, in London, without first obtaining consent from the L.C.C., who may withhold consent, or add further conditions. Indeed, it is now usual for the L.C.C. to attach a requirement that floor slabs be designed to support safely a superimposed load of 50 lb. per square foot, more than is specified in the Code of Practice. This and other requirements may go far to nullify the economies of the code, and cause delay, since an engineer is not safe in proceeding with his design until the actual consent is obtained.

Few places outside London have detailed regulations concerning steel or reinforced concrete frame buildings, and usually limit themselves to the requirement that the framework " shall be adequate to secure due stability." Unfortunately many of them, partly, no doubt, owing to the lack of other suitable codes, have taken the L.C.C. regulations as their standard.

Apart from the disadvantages outlined such regulations are probably the best that can be found, provided there exist codes of practice, standard specifications, etc., which are periodically revised to represent the latest professional opinion. It is in this respect that such documents as the Draft British Standard Specification for Electric Arc Welding of Steel Structures, the Draft Regulations for the Design of Flat Slab Floors, etc., referred to in this supplement, are of importance from the architect's point of view. He can first ask that his engineer design in accordance with the code, knowing that the resulting structure will be safe and at the same time economical, and he can, in preliminary conversations with the authorities, inform them that his building will be designed in this manner and obtain their consent. Until the present time he has had no option but to put forward some foreign standard and it is doubtful whether a borough surveyor is impressed by the statement that a factory is to be designed in accordance with the flat slab regulations of Chicago (this has been necessary in the past) and it is also doubtful whether he would have the time, or the staff, to check the design in detail. If, however, the surveyor may rely upon a standard specification, his position, and that of the architect, is greatly simplified.



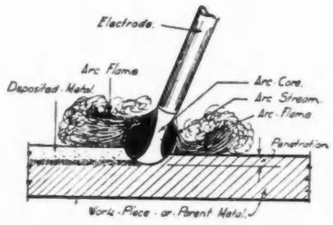
THE APPLICATION
OF
WELDING
TO
STEEL FRAME STRUCTURES

●

STEEL structures with welded instead of riveted joints are becoming more and more common. First used in this connection just over 12 years ago, the method has made steady progress in spite of considerable opposition. Although it is true that progress has been more rapid abroad than in England, there are a considerable number of all-welded structures in this country, and the British Standards Institution, recognizing the importance of the subject, has issued a Draft Specification for Electric-Arc Welding of Steel Structures. This specification deals only with the electric-arc method, but similar results have been obtained in America with the oxy-acetylene process.

The Process

The principle of the two methods is identical—the pieces of metal to be joined are placed together and molten metal from a filler rod is projected on to them, and, fusing into each of them, forms a joint. The deposition of weld metal is shown in Fig. 1, and the types of joint used (i.e., butt and fillet welds) in Fig. 2, in which the metal added by the welder is indicated by a tone.

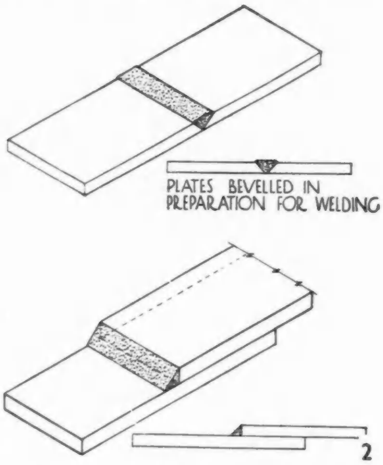


1

Deposition of weld metal

In the oxy-acetylene process (shown in Fig. 8) the heat is supplied from an oxy-acetylene torch which is played on the parts to be joined, and in which the operator holds a metal rod which melts and, when in the molten state, fuses with the main metal.

In electric arc welding, Fig. 7, the filler rod is an electrode connected to one pole of the welding plant; the other pole is connected to the work to be welded. When this metal electrode is touched to the work and withdrawn a very short distance, an arc is formed and the heat developed causes the electrode to melt and be deposited as molten metal, which fuses with the parts to be joined. In each case the filler rods are made of metal which must pass certain tests, and its composition arranged so that the metal deposited will have similar properties to the metal of the members to be joined.



2

Above: butt weld. Below : fillet weld

Advantages

The advantages claimed for welding over riveted construction include :—

(1) A saving in weight and cost of the steelwork.

3

Detail of a fillet weld

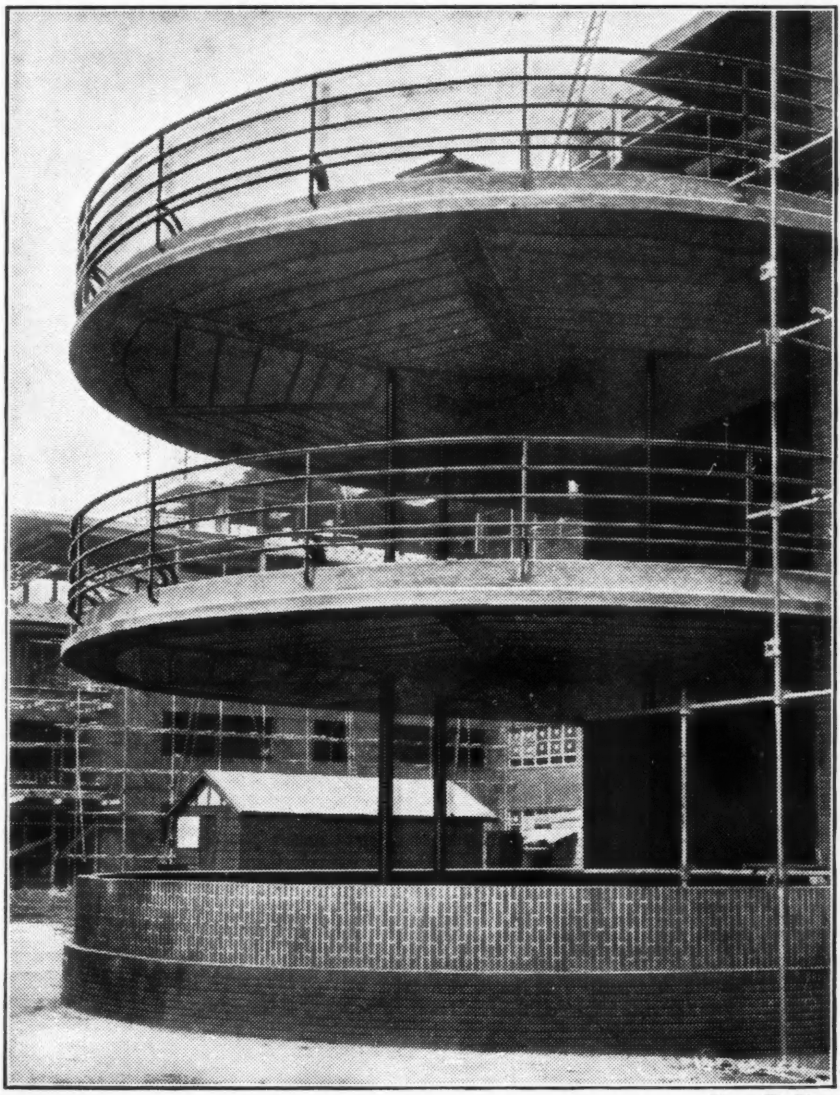
(2) Simplification of design, giving joints that are neater, more resistant to corrosion, and easier to paint than riveted joints.

(3) Noiseless erection.

With regard to the first claim, for complicated steelwork, such as trusses, there seems little doubt that fairly large savings in weight can be obtained. This is due partly to the elimination of gusset plates (which may account for 20 per cent. of the weight of the truss) and partly to the fact that since no holes are required in the tension members, the strength of these can be calculated on their full areas, without any deduction for rivet holes. There is also a saving in some cases due to the fact that, in riveted work, angles in tension often have to be made larger than is necessary in theory, in order to give a leg wide enough to take the rivets.

For ordinary beam and stanchion construction little saving in actual weight of steelwork seems possible. A slight saving may be made in the connections, but since these only amount to about 5 per cent. of the total weight, this saving can never be very great. It is often claimed that weight can be saved if the structure is made monolithic, thus reducing the moments for which the beams need be designed.

Whilst one of the advantages of welding is that monolithic structures, if required, can be produced more easily than by riveting, it is doubtful whether much economy results, since any saving in weight of beams is counterbalanced by the greater weight and complexity of the connections and also by the heavier columns necessary. The principal saving must therefore be found in the cost per ton of the steelwork. If, for example, beams can be arranged so that they need not be cut to exact length in the shops, and do not require any handling and drilling, a large saving in cost will result. In this connection it should be remembered that the cost of handling beams and bringing them to the drilling machine is a large part of the cost under the item drilling, and the saving will not therefore be great unless *all* holes are eliminated.



4

Photo : The Times

4. *Welded sun balconies at the Freemasons' Hospital, Ravenscourt Park, W. Architects, Sir John Burnet, Tait and Lorne.* 5. *Lower balcony under test with 12 tons suspended from each cantilever arm and 10 tons supported on the centre.* 6. *Detail of joints. The girders were fabricated from plates and the lower flanges butt welded at the connections. The upper flanges at the central connection were joined by a cover strap as shown.*

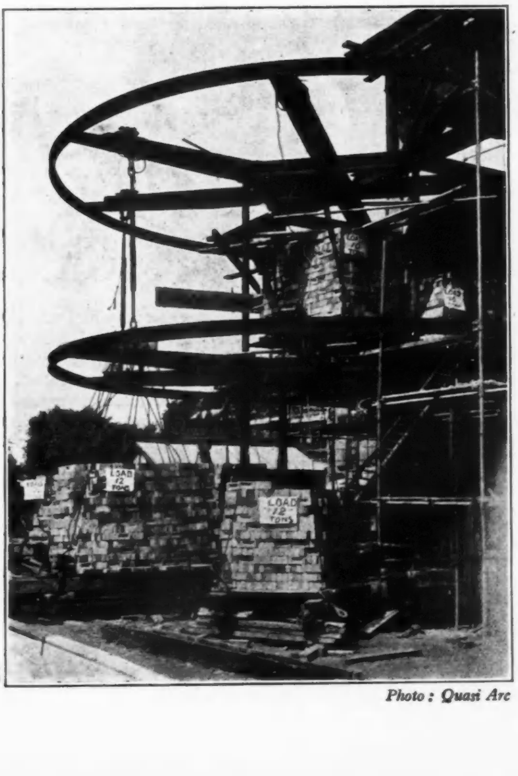


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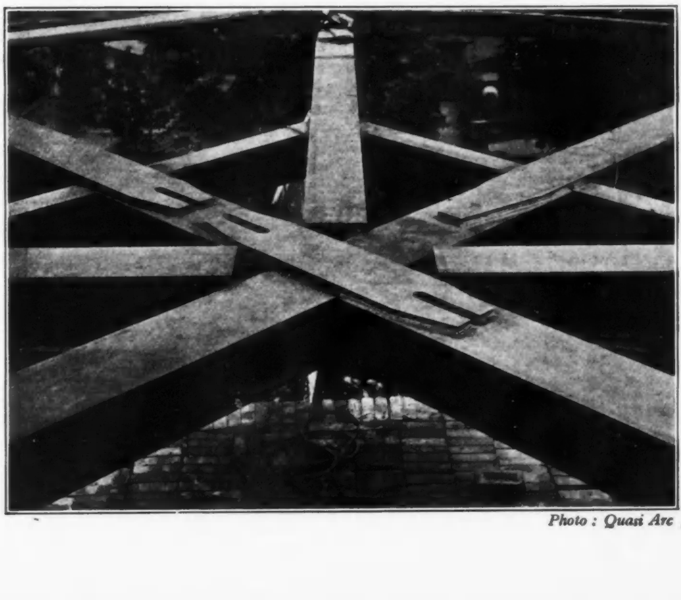
Photo : Quasi Arc

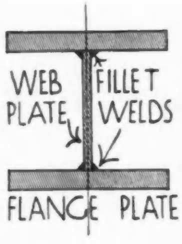


6

Photo : Quasi Arc

7

Photo: Quasi-Arc.



9

8

Photo: The British Oxygen Co.

7. *Electric-arc welding;* **8.** *Oxy-acetylene welding;* **9.** *A built-up welded beam similar to that used at the Freemasons' Hospital, Ravenscourt Park, W.*

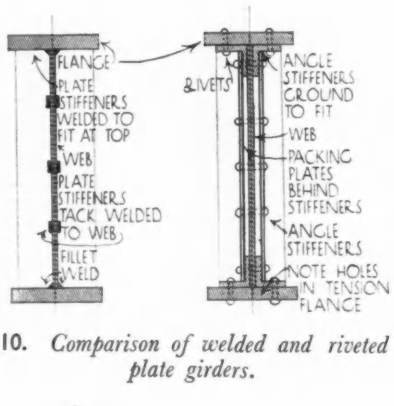
Design

With regard to simplicity of design, this is well illustrated by the photographs in Figs. 4, 5, and 6, showing the sun balconies at the Freemasons' Hospital, Ravenscourt Park, W. It should be noted that the construction of these balconies was only made possible by welding, since, owing to the shallowness required by the architects, no rolled sections of sufficient strength were obtainable and, with the depth available, it would have been practically impossible to rivet up suitable plated beams.

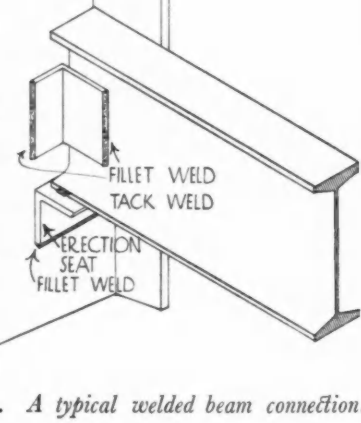
To solve the problem, special sections, 12 ins. by 12 ins. were made up of three plates as shown in Fig. 9. This method has also been adopted for plate girders, and it is interesting to compare the corresponding sections built up by welding and riveting, Fig. 10. Since the edges of the web plate may be cut with an oxy-acetylene cutting torch, the oxy-acetylene process is particularly well suited to shaped cantilevers.

Joints

Although it has been stated that welding tends to simplify joints, this does not mean that the design of welded joints is in itself a simple matter, since it must always be borne in mind that a welded joint is more rigid than a riveted joint, and there is, therefore, more uncertainty about the distribution of stress, both in the joint and in the parts connected. The usual assumption in riveted work is that the joint between beam and stanchion, for example, "gives" sufficiently for the beam to be designed as free-ended (i.e., the end of the beam is free to take up its slope as if the column were not there) and whilst this method is inconsistent, particularly when wind bracing connections are used, the results obtained by its use have so far been satisfactory. If, however, a beam web is welded direct to the flange of a column, the connection can only "give" and permit the beam to take up its slope by partial failure of the weld, and this failure may be progressive until the joint is destroyed. There are therefore two alternatives, either the joint must be designed with sufficient strength to fix the end of the beam, or, alternatively, a joint must be made sufficiently flexible to enable the beam to take up its slope without any yielding of the welds themselves. Such a joint is shown in Fig. 11. There is a further advantage in that, when web angles are used the beam need not be cut exactly to length.


FLANGE
PLATE
STIFFENERS WELDED TO FIT AT TOP
WEB
PLATE
STIFFENERS TACK WELDED TO WEB
FILLET WELD
RIVETS
ANGLE STIFFENERS GROUND TO FIT
WEB
PACKING PLATES BEHIND STIFFENERS
ANGLE STIFFENERS
NOTE HOLES IN TENSION FLANGE

10. *Comparison of welded and riveted plate girders.*



11. *A typical welded beam connection.*

Disadvantages

It is difficult to obtain an idea of the actual stress distribution in such a joint, and this has been quoted as a disadvantage of welding. Other disadvantages are:—

(1) No satisfactory method has yet been devised for testing the actual strength of a welded joint without destroying it.

(2) It is claimed that the human element enters too largely into the making of welds for reliance to be placed on them for important structures.

These disadvantages are very real ones, but they also apply equally to reinforced concrete construction, which is now well established. They can be overcome, as they are overcome in the case of reinforced concrete, by dealing with reputable firms and by close supervision, combined with frequent tests of material.

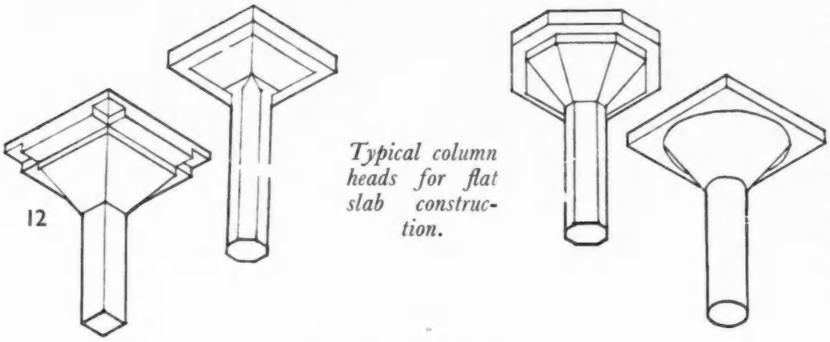
Regulations

Welding is not allowed by the L.C.C. steel frame building regulations and has consequently been almost entirely confined in this country to single story factory buildings. The railway companies have used welding for important bridge work, particularly the strengthening of existing bridges. There is at present under construction a bridge carrying the approach road of the new Tees-Newport Bridge across the L.N.E. Railway, on the Durham side of the river, which will contain approximately 450 tons of steel, all of which will be erected without rivets. It consists of five spans, the centre one being 64 ft. with two side spans of 48 ft. and 28 ft. The roadway is 36 ft. wide with an 8 ft. pathway on either side.

In Germany regulations governing the design and construction of welded structures have been in existence for some time, and in the Dominions, particularly in Australia, the method has been developed considerably. In the United States of America, although about 100 cities and towns have provision for welding in their building regulations, the three largest cities, New York, Chicago and Philadelphia, have not yet officially recognized welding in building construction, but have allowed it under special conditions in certain cases. Among the larger welded building frames are :—

Location	Structure	Height	Steel tonnage	Shop or Field Welded
Boston, Mass.	Office block	14 stories	1,314	Field
Dallas, Tex. . .	,, ,,	19 ,,	1,170	Both
Wilmington	,, ,,	14 ,,	1,576	Field
Philadephia	Factory	60 ft.	1,000	Both
Norristown	Court House	5 stories	800	Field
Boston, Mass.	Hospital	10 ,,	492	Both
Providence . .	Court House	8 ,,	811	Field

In addition important extensions to Yale University were carried out by welding, including one block which, to quote an American description, was of "Gothic style" and was "beyond doubt the most complicated structure ever welded."


12

Typical column heads for flat slab construction.

FLAT SLAB

CONSTRUCTION

●

ALTHOUGH there are several notable examples of the use of flat slab, ("mushroom") construction in England, almost all the important developments of the system have taken place abroad.

For this apparent neglect there are several reasons. In the first place the construction is not well suited to the irregular sites so often found here, since it requires a series of nearly equal square or rectangular bays. Secondly, it has often been regarded with suspicion, since it is a form of construction founded, not on theoretical reasoning, but on empirical rules resulting from extensive tests in America, the country of its origin. Thirdly, and this is probably the most important reason, the L.C.C. regulations prohibit its use in the London area and there have been no British regulations giving the rules necessary as a basis for design.

The Institution of Structural Engineers has recently overcome this last difficulty by issuing Draft Regulations concerning the design of flat slab floors in reinforced concrete, and architects desiring this form of construction can now state in their specifications that their engineer's designs shall be in accordance with British, instead of American, regulations.

Definition

The term flat slab is applied to a form of construction in which the floor is carried directly on the columns without the use of other elements such as beams or girders. The columns are provided with flared heads or capitals, and the slab may be uniform in thickness from the edge of one capital to another, or the portion around each column may be increased in thickness forming what is known as a drop panel, Fig. 13.

Advantages

The chief advantages of the system over beam and girder construction are due to the absence of beams in the ceiling, and include :

(1) a saving of twelve inches or more in the height required from floor to floor.

(2) Better lighting, either daylight or artificial.

(3) Better ventilation, owing to absence of air pockets in the ceiling.

(4) Easier arrangement of sprinklers, piping, shafting, etc.

(5) Simpler formwork in construction.

(6) A saving in material (if the floor loads are heavy).

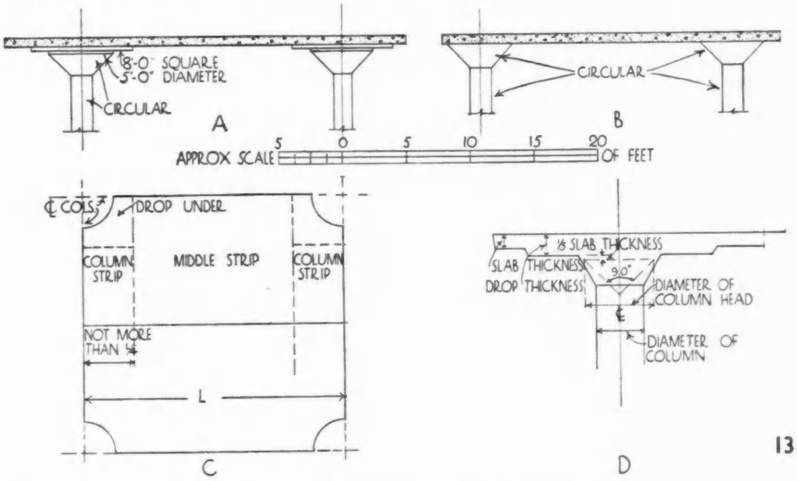
(7) Greater fire resistance owing to the absence of sharp edges and corners.

Limitations

To enable the system to be used, however, the site must be capable of being divided into approximately equal square, or slightly off square, bays with column centres from sixteen to twenty-five feet apart. Furthermore the floor planning must not require a large amount of solid partitioning or large openings in the slabs. *There will be no economy over beam and girder construction for superimposed loads of under 100 lb. per square foot.*

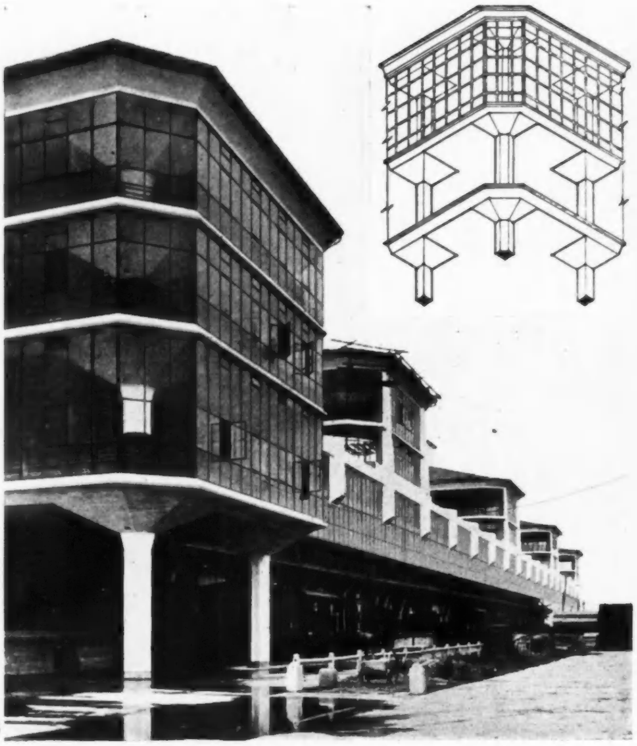
Design

It has previously been mentioned that the rules for proportioning the sizes of members, amount of reinforcement, etc., are based, not on theory (no satisfactory theory has yet been evolved which suits the conditions of actual design), but on the results of extensometer measurements of concrete and steel in actual buildings under test loads. Consequently more is known of what actually happens in flat slab construction than in the more usual beam and girder construction. The latter has been developed from theories



13

Flat slab construction. A, with drop panel. B, without drop panel. C and D illustrate the parts of the slab referred to in the article.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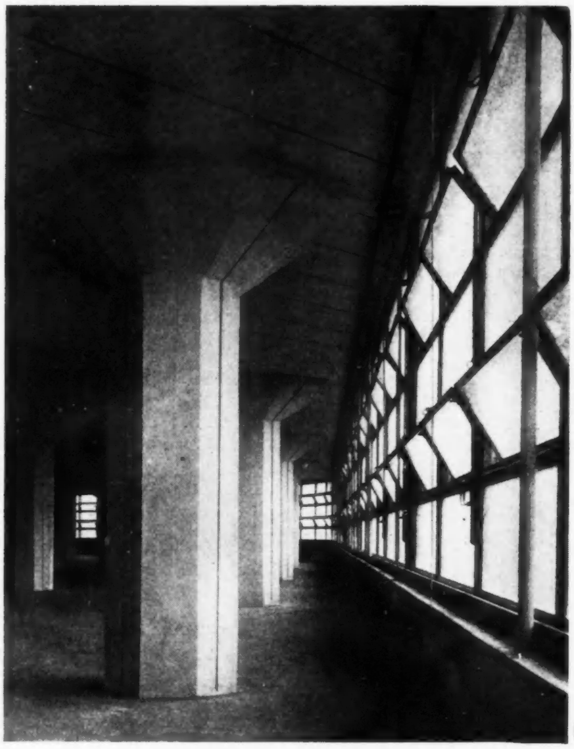
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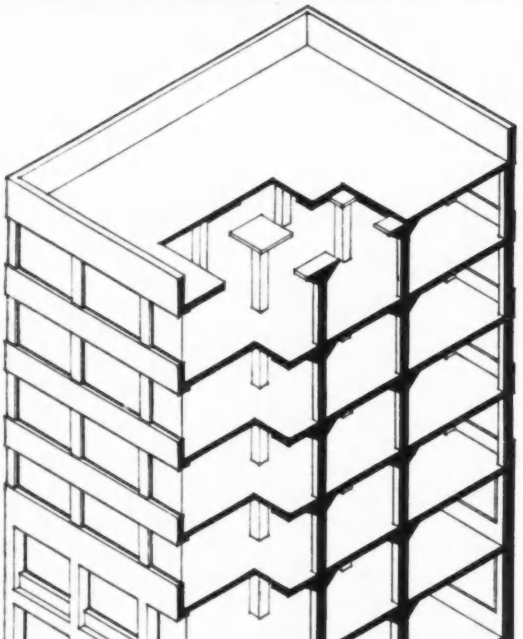

16

Flat slab building types:

14. *Boots' factory at Nottingham. Designed by Sir Owen Williams. The piers are within the building and the glass surface is uninterrupted.*

15. *Warehouse and stockrooms in Paris. Jean Démaret, architect. The column spacing permits an uninterrupted glass surface.*

16. *Piers, flush with the wall surface, forming vertical divisions in the glazing.*

which, while giving perfectly safe results, are now known not to represent the true facts. It should not be thought, however, that design is a simple matter that can be carried out by other than competent engineers, experienced in this form of construction.

The two main forms of construction are shown in Figs. 12 and 13, but either of these can be used with several different arrangements of reinforcement, the most usual being the "two-way system" and the "four-way system." In the former bands of rods are placed running in the two directions parallel to the lines of the column centres; while in the "four-way system" additional bands run parallel to the diagonals from column to column.

For the purpose of design the slab is divided into middle and column strips as shown in Fig. 13 C. The regulations of the Institution of Structural Engineers take the width of the column strip as half the width of the whole panel for slabs without drops, and equal to the width of the dropped slab where this type is used.

Points the architect should observe are: the ratio length of panel to width of panel must not exceed one and a quarter, while in series of panels of unequal lengths, the length or breadth of any one panel must not vary from the mean of such lengths or breadths by more than one fortieth.

Other rules affecting preliminary drawings are:

1: The thickness of the slabs in inches will be approximately one-third of the span in feet for internal panels without drops, and will be approximately 11 per cent. greater for external panels, unless the span is reduced by approximately 11 per cent. For panels with drops these thicknesses will be about 11 per cent. less.

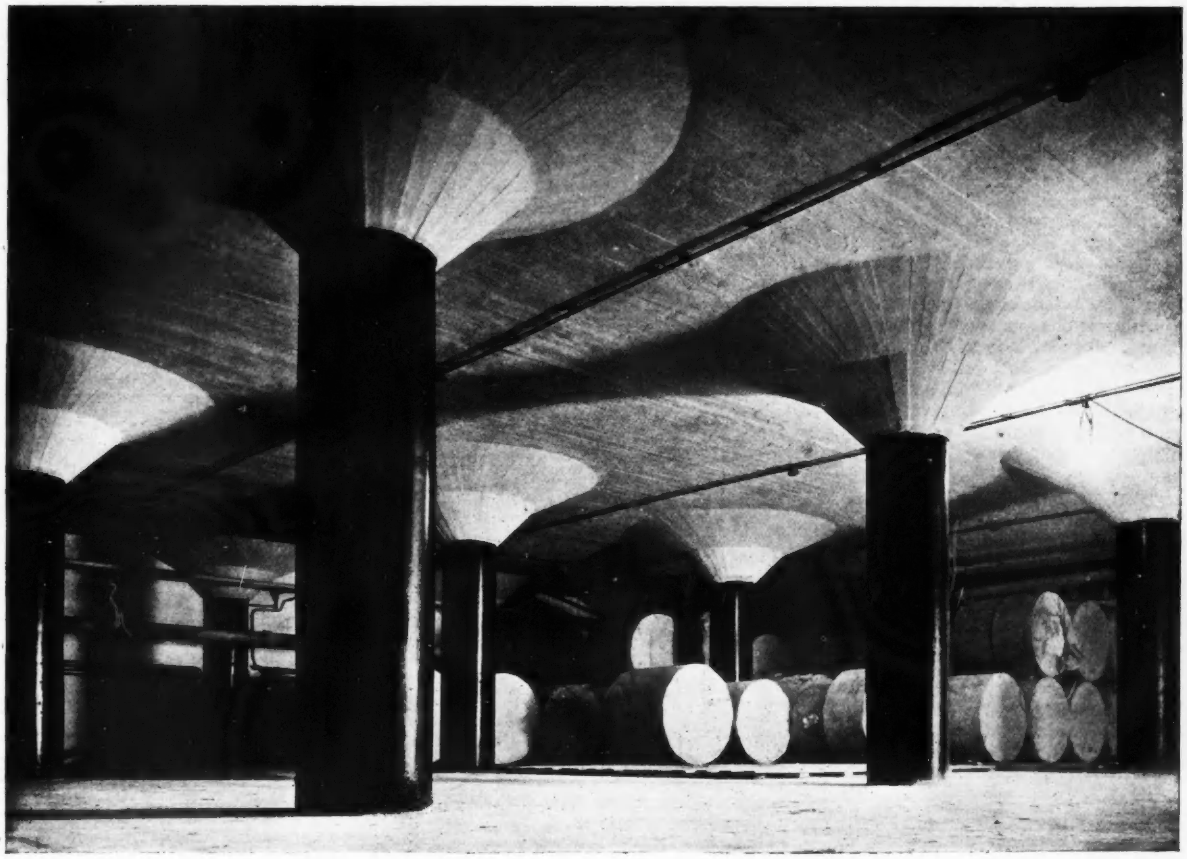
2: The width of drop, if used, will be one-third of the span, and its thickness below the slab will be from one-third to one-half of the slab thickness.

3: Openings through the floor, larger in any direction than one-tenth of the span, need trimming beams.

4: Partitions can be placed anywhere on the floor, without beams to support them, provided their weight does not exceed one-twentieth of the dead and live load of the panel in which they are situated. Heavier partitions can be placed on the lines joining the column centres, again without beams, provided they are designed to span from column to column.

5: All interior columns are to be provided with an enlarged head which, measured as shown in Fig. 13D, shall be one-fifth to one-quarter of the span. Columns may, of course, be round, square, octagonal or any other suitable regular shape.

In conclusion it may be mentioned that a printing press floor in a multi-storied building, recently completed in America, designed on the flat slab principle, had the enormous superimposed load of 2,100 lb. per square foot, i. e., more than ten times the load allowance required by the L.C.C. in warehouse design.



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Flat slab construction, without drop panel, in the paper storage department at the " Turun Sanomat " Building, Åbo, Finland, designed by Alvar Aalto. The shafts of the columns are finished in black cellulose enamel.

WEIGHT SAVING
IN
FRAME BUILDINGS

●

THERE is no way more certain of reducing the cost of a building than by cutting down the amount of material put into it—a saving could be shown in transport costs alone—yet almost every new structure in England is much heavier than it need be.

Immediately a reduction in weight is made in a specific part the effect is far reaching ; the cost of the portion of material eliminated does not, by any means, represent the whole of the saving. In a steel-framed structure, for instance, a reduction in weight of material is followed by a reduction in the sizes of the frame members that carry the weight down to the foundations, and a corresponding reduction in the size of the foundations.

A reduction in the size of the steelwork, i.e., sections of members, enables (*a*) floor heights to be reduced and a saving to be made in walls and partitions ; (*b*) additional floor space to be gained by reducing sizes of piers and columns ; (*c*) less casing to beams and columns, less weight in casing and less decoration.

A saving in material also saves time on the job as the speed of building, especially in cities, is often governed by the amount of material that can be unloaded per day.

The " tree of economy " overleaf shows the cumulative effect of lightening the load.

An analysis of a number of office buildings showed the total weight to be made up of:—

(1) Live load, ...	14-16%.
(2) Structural steel, ..	4-5%.
(3) Foundations, ...	20%.
(4) Remainder, ...	59-62%.

The buildings were, in each case, fairly elaborately finished, i.e., with cornices, pilasters, heavy wood panelling and other superfluities.

Considering these items in turn—

Live Load

The amounts allowed for live load under the old and new regulations in London are as follows :—

	Old L.C.C. Regulations lb. per sq. ft.	New Code of Practice lb. per sq. ft.
Domestic rooms ..	70	40
Offices above the Ground Floor	100	50
Workshops	112	100
Warehouses	224	200
Flat Roofs	56	30

In the case of office buildings there is a saving of 50%, the value of which can be estimated by reference to the analysis given, which shows the live load to be from 14-16% of the total. Furthermore, the new Code of Practice allows greater percentage reductions in the calculation of live load on columns and foundations. (It is extemely unlikely that all floors will be subjected to full live load at the same time and, in view of this, regulations allow a percentage of the live load on upper floors to be omitted when the calculations are made for the columns in the lower floors and the foundations.)

The percentage reductions are :—

	Old L.C.C.	Code of Practice.
Roof	—	—
First floor below roof ..	—	10
Second	5	20
Third	10	30

The maximum permissible reduction in each case is 50%.

Structural Steel

The weight of the structural steel is a small percentage of the whole, but on account of its cost a small saving may mean considerable economy.

Saving may be made as follows :—

(*a*) By application for waivers in accordance with the Code of Practice.

(*b*) By the use of a high tensile steel such as Chromador (see A.J., March 29, Trade Notes, p. 440). This saving will depend on the range of sections available for use in the new material, but it is understood that all British Standard Sections and plates from $\frac{3}{16}$ in. upwards are now being rolled in England. Such steel is to be used for the new staff annexe to the Regent Palace, London, for Strand Hotels, Ltd., with, it is claimed, a saving, over ordinary steel, of 5% in cost, and 14% in weight of steel-work.

(*c*) By planning for economical steelwork layout. This is facilitated by a close co-operation between architect and engineer from the sketch-plan stage. The weight of steel may be reduced by :—

(1) Close spacing of stanchions,

(2) Elimination of stanchions resting on girders,

(3) Allowing as great a depth of beam as is possible.

Prior to the introduction of the Code of Practice it was necessary to use, in London buildings, from 1·75 to 2·5 lb. of steel per foot cube of finished building, the amount depending on the character of the structure. Although this amount has now been reduced, the table of lb. per cubic foot for

No. of Stories.	American Office Buildings	No. of lb. of Steel per cu. ft. of building.
86	Empire State	3·22
71	Chrysler	2·87
71	Manhattan Bank	2·67
58	500, 5th Avenue	2·53
53	Lincoln	2·38
45	Radio Corporation ..	3·12
36	Equitable	2·67
	American Hotels	
47	Waldorf Astoria	2·53
40	Barbizon Plaza	2·03
25	Governor Clinton ..	1·82

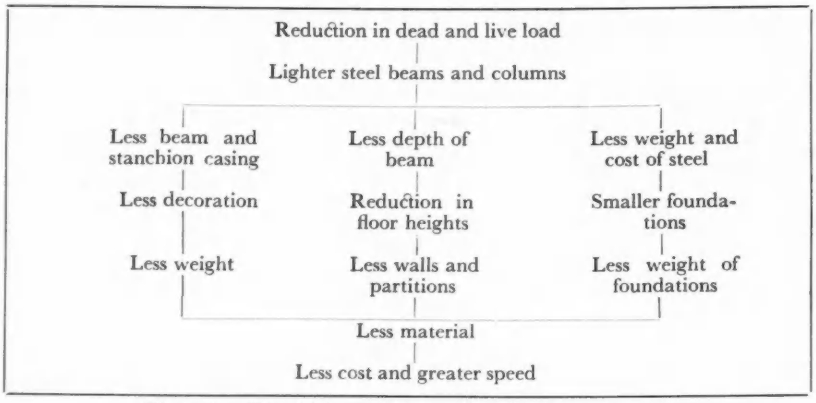
Reduction in dead and live load
Lighter steel beams and columns
Less beam and stanchion casing
Less depth of beam
Less weight and cost of steel
Less decoration
Reduction in floor heights
Smaller foundations
Less weight
Less walls and partitions
Less weight of foundations
Less material
Less cost and greater speed

Table A.—The "Tree of Economy," referred to on page 55.

American buildings, given in the preceding column, suggests that still further savings should be possible since, owing chiefly to the increase in the weight of the columns, the percentage weight goes up as the number of stories is increased. The Americans work to approximately the same live loads and stresses as we do, so the weight of their "remainder" must be considerably less than ours.

Foundations

A reduction in the weight of foundations follows a reduction in the weight to be carried ; it also follows from the close spacing of stanchions since the bases are thinner, while their total area is independent of the spacing. A reduction in the weight of foundations will be possible when the new Code of Practice for reinforced concrete, which is being drafted by a committee of the Department of Scientific and Industrial Research, is published and adopted by the authorities. It is interesting to note that the weight imposed by the highest buildings in London is between 1 and 2 tons per square foot of ground area.

Remainder

In this section, which represents approximately 60 per cent. of the total weight of the building, there are the greatest opportunities for making economies in load.

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Photo : Holloway Brothers

A new structure at the Royal Victoria Docks showing the essential members of a modern frame building. The sizes of the members are governed largely by the load the frame must carry.

Any estimate of load, excluding live load, on each floor, made for the purpose of steelwork calculations, comes under the following headings :—

(1) Constructional slab.

(2) Finishes above and below the slab.

(3) Beam casings.

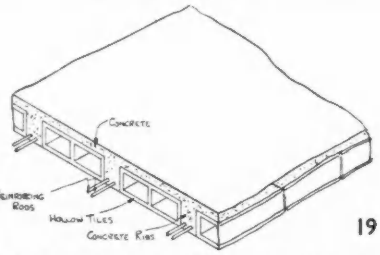
(4) Partitions under 9 ins. thick (walls 9 ins. and over are taken separately).

A saving in weight may be made under each of these items.

Constructional Slab

In a building designed for a light superload the weight of a solid reinforced concrete slab is a large proportion of the total load to be carried. Furthermore, the concrete below the neutral axis (which is approximately one-third of the distance down from the top of the slab), apart from providing shear resistance near the ends of the span and serving as cover to the reinforcement, contributes nothing to the strength or carrying capacity of the slab, but merely adds to the weight to be carried.

Hollow tile slabs are considerably lighter than solid reinforced concrete, especially since obsolete regulations, still enforced, by permitting only low stresses in concrete, require an unnecessarily great floor slab thickness. The proportion of weight that may be saved is shown in Table B, from which it will be seen that a 6-in. hollow tile slab weighs 45 lb. per ft. super, whilst 72 lb. per ft. super must be allowed for solid reinforced concrete though the resistance moments of solid and hollow tile slabs of equal thickness are approximately



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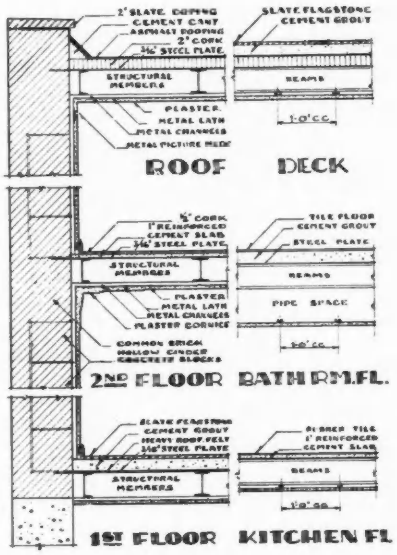
A hollow tile floor, which saves weight by eliminating unnecessary concrete below the neutral axis.

the same. It should be remembered, however, that the saving in weight may be made at the price of an increased initial cost of floor; but, on the other hand, hollow tile slabs have greater thermal and sound-insulating properties than solid reinforced concrete.

An exact comparison of costs of the two types is very involved, because so much depends upon the varying ratio of the cost per cubic foot of concrete, and because the effect of the saving in weight on the remainder of the framework and foundations varies in every case.

Hollow tile slabs consist of a series of T-beams, formed by laying rows of ordinary 12-ins. by 12-ins. hollow tiles or partition blocks on the shuttering, generally with a 3-ins. space between adjacent edges, as shown in Fig. 19. There are, of course, many efficient types of patent hollow tile especially made for floor construction, each with its own characteristics and advantages, but far too numerous to be dealt with here in detail.

Weight will be saved by keeping the slab spans short, and granolithic can sometimes be laid with a solid slab as an integral part of its compression flange.



20. *Typical details of the battledeck floor, a type evolved in America to save weight.*

Thickness of Slab	Size of Hollow Tiles (at 15-in. crs.)	Rods per Rib	Area of Steel per 15 in. Width	Percentage of Steel	Effective Depth	Least Resistance Moment of Slab	Weight of Slab in	Weight of solid Concrete Slab,
in.	in.	in.	sq. in.			in. lb.	lb. per sq. ft.	lb. per sq. ft.
4	12×12×3	one-½ in. ,, – 7/16 ,,	·346	·709	3·25	12,210	32	48
5	12×12×4	,, – 9/16 ,, ,, – ½ ,,	·444	·712	4·16	20,100	40	60
6	12×12×4½	,, – ⅝ ,, ,, – ½ ,,	·502	·662	5·06	28,600	45	72
7	12×12×5½	two– ⅝ ,,	·612	·674	6·06	41,700	50	84
8	12×12×6	one– ¾ ,, ,, – ⅞ ,,	·748	·726	6·87	55,000	60	96
9	12×12×7	two– ¾ ,,	·88	·745	7·87	72,900	65	108
10	12×12×7½	,, – ¾ ,,	·88	·662	8·87	88,000	70	120
11	12×12×8½	one– ⅞ ,, ,, – ¾ ,,	1·04	·716	9·69	109,000	75	132
12	12×12×9	,, – ⅞ ,, ,, – ¾ ,,	1·04	·650	10·69	125,000	80	144

Table B.—Properties of Hollow Tile Slabs.

An interesting American floor construction is shown in Fig. 20. This has been adopted principally with the idea of saving weight, and is known as the "Battledeck." It consists of thin steel plates welded to the tops of the floor joists. The ceiling consists of gypsum slabs, while the requisite finish is laid on top of the steel plates.

Finishes

Screeding for covering to pipes is very heavy and should be avoided. Where boards and battens are not desirable, light weight or multicellular concrete can sometimes be used.

Beam Casings

These may weigh 15 to 30 lb. per sq. ft. of floor area, and their weight is, of course, reduced by reduction in the size of the beams. Building regulations, unfortunately, do not allow any increase in allowable stress in beams cased in concrete, although tests show that the increase in strength is considerable.

Partitions

Shallow beams permit a reduction in the height between floor and ceiling, and consequently less height in partitions.

There are on the market today many new light-weight materials for partitioning, either for building up by a "wet" process or for "dry mounting." There are hollow partition blocks in concrete, pumice, moler, breeze and baked clay, cellular bricks, compressed fibre and gypsum boards, corkboard, laminated wood, plywood and combinations of the latter with compressed fibre board.

Some are liable to shrink and crack and, furthermore, cause unsightly cracks in plaster applied to them. It is advisable to ask manufacturers to suggest an ideal specification for plaster to be applied to their material.

Hollow partition and ceiling blocks can now be obtained with a permanently glazed surface in several standard colours. Such blocks eliminate plastering and applied decorative finish, and the ceiling blocks may be used as permanent shuttering.

Walls

These may be lightened by the use of cellular bricks or hollow tiles as a backing to 4½ ins. of external facing material. The Code of Practice, by allowing this construction and cavity walls for building in the L.C.C. area, has made possible great savings in weight of external walls.

Aluminium might be more widely used. Its use in America in the form of ornamental plaques, heavy looking and resembling too closely cast iron in appearance, has prejudiced many against it. Its economical employment is often hampered by regulations which insist upon a minimum of 50 per cent. solid wall on the face of a building which, if steel-framed, needs no solid wall whatsoever for structural purposes. Such restrictions prevent also the use of large areas of glazing, which form in many Continental buildings extremely light walling.

LITERATURE

Arc Welded Steel Frame Structures. By G. D. Fish. London: McGraw-Hill Publishing Co., Inc. Price 30s. net.

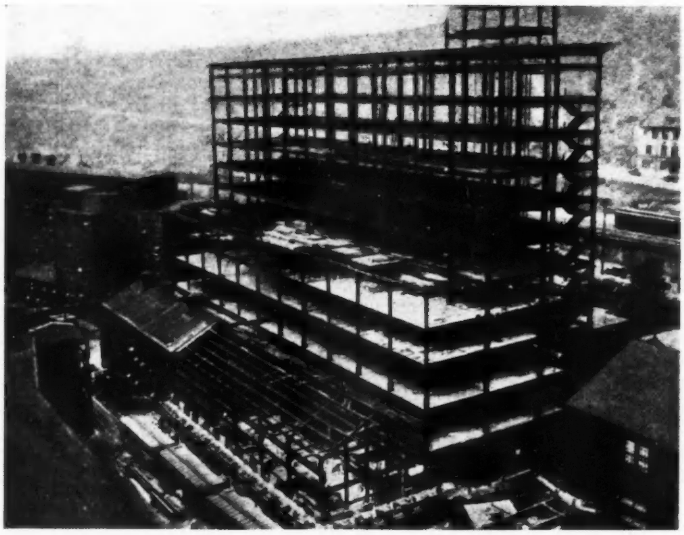
ALTHOUGH the application of welding to steel frame construction is one of the most important developments in structural engineering of the past few years, the literature on the subject has consisted of scattered articles in various periodicals. Furthermore, many of these articles are by writers whose enthusiasm for welding is greater than their knowledge of structural engineering. The publishers are, therefore, to be congratulated on the production of this pioneer book, which adequately covers the developments of structural welding up to the present time. The author is also to be congratulated on a very fair statement of the case of riveted versus welded construction. His chapter on the relative economies of the two methods will repay careful study by all interested in framed structures, and particularly by enthusiastic advocates of welding.

The book commences with a brief history of welding and descriptions of the most important buildings erected by this method of construction, and in this connection it is interesting to notice that, although the book deals mainly with American practice, in the list of pioneer examples (erected in 1920), no fewer than three of the four buildings mentioned are structures erected in Great Britain. It seems unfortunate that this proportion has not been maintained in later developments.

Following the history is a brief description of the two main processes employed, (electric-arc and oxy-acetylene) standard specifications for welded buildings and bridges, analysis of stresses in welds and details of typical connections. Then follow chapters on economy, construcion and erection methods, supervision, detailing, etc.

In dealing with connections of beams to stanchions the author is very sound in his warnings that if the type of connection adopted tends to "fix" the end of the beam, without being strong enough to do so, trouble will result. He does not, however, appear to carry his warnings a step further to point out the danger of the large moments that will be induced in the columns if the connections do succeed in "fixing" the end of the beam.

The book is well illustrated with photographs and clearly produced diagrams and tables, and should be welcomed by all interested in the future development of framed structures.



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Westinghouse Engineering Building, East Pittsburgh, Pa., 1930. The largest all-welded structure. B. H. Brock, architect and engineer. From "Arc Welded Steel Frame Structures."

Competitive Design of Steel Structures. By Peter Russell and George Dowell. London: Chapman and Hall, Ltd. Price 21s. net.

THIS book consists of detailed designs for steelwork for two types of buildings, one a large works and the other a cinema. No general treatment of the theory and practice of design is given, the various members being treated separately.

The term "competitive" as used in the title is generally applied by the engineer to a design in which the normal factor of safety has been reduced, and certain refinements making for really good design have been sacrificed in order to cut costs to a minimum. No general advice on this type of designing is given, although the title might lead one to expect it. Neither would the designs given be considered "competitive" nowadays. For example, few designers would proportion the rivets in stanchion splices, not subject to bending, to take 40 per cent. of the load—even the L.C.C. only require sufficient rivets to retain the members in position.

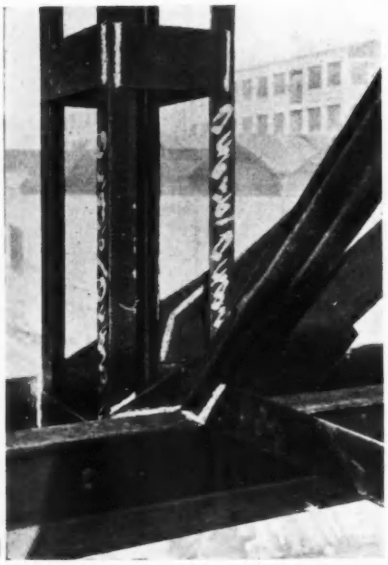

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Photo: Murex

All-welded junction of truss and boom.

In several other places, owing no doubt to the time taken in preparation, the material is out of date. For example, the formula for web buckling (page 243) can no longer be called the L.C.C. formula; the breaking strengths given for 1 : 2 : 4 concrete (p. 216) are too low for modern materials; and the practice of grouting up stanchion bases (p. 211) is now being superseded by the sounder method of pinning up with cement mortar.

Some of the statements are difficult to follow, as, for example (p. 28), "web stiffeners . . . shall not be further apart than 6 ft. 0 in., nor than the depth of the girder, nor where the shear stress on the gross area of web plate exceeds $\frac{T}{1+\frac{H^2}{3{,}000}}$."

The book is well produced and the diagrams and drawings are clearly printed and easy to follow. These and the large number of examples of beam loadings, etc., should provide useful material for lecturers in steel design.

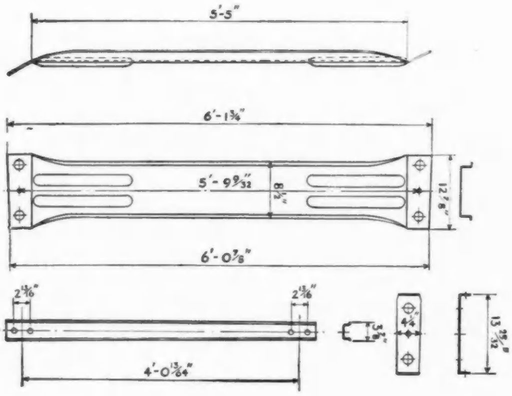
Principles of Reinforced Concrete Construction. By Turneaure and Maurer. London: Chapman and Hall, Ltd. Price 25s. net.

THIS is the fourth edition of an American treatise on the design of reinforced concrete, which has had a deservedly high reputation since it was first published in 1907. The present edition has been largely re-written and revised with "due consideration for the latest experiments and developments in the methods of calculation and design."

Commencing with the history of reinforced concrete, chapters follow on the theory of flexure, shear and bond stress, design and deflection of beams, design of columns and flat slabs. In all cases the theoretical findings are compared with the results of tests, a very desirable arrangement, since engineers are finding, more and more, that while existing theories give results that are perfectly safe, they do not follow the facts of the case in their reasoning. For example, it is usual to calculate the stress in the reinforcement in a column as *m* times the stress in the surrounding concrete where *m* is the ratio of the elastic moduli of the two materials steel and concrete. Taking the usual value of *m*, i.e., *15*, with *600 lb.* per square inch in the concrete, this gives a stress of *9,000 lb.* per square inch in the steel. Actually tests show that the steel, owing to shrinkage and plastic yield, is stressed up to its elastic limit, say *40,000 lb.* per square inch, or nearly five times the calculated stress. Yet the carrying capacity of the column, as shown by tests, is approximately what we should calculate it to be. The importance of combining theory with tests cannot, therefore, be exaggerated.

Further chapters follow on the design of buildings, including an analysis of continuous beams and frames, arches and retaining walls. The last chapter gives tables and diagrams (unfortunately for us with American notation) and the report of the American Joint Committee on Design and Working Stresses which, until our own Code of Practice is published, is the most up-to-date consensus of professional opinion on the subject.

The book can be thoroughly recommended as an up-to-date text and reference book for all concerned in the design of reinforced concrete.



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T R A D E N O T E S

BY F. R. S. YORKE, A.R.I.B.A.

Pressed Steel Roofs

By the Lamella system an arched roof or complete semi-cylindrical structure is built from standard pressed steel units, assembled in a series of diamond-shaped sections to form a rigid framework, upon which any normal type of roofing or patent glazing may be mounted.

●

No trusses are required, since the roof is sufficiently rigid to permit erection in two independent halves, which form self-supporting cantilevers until they meet at the centre.

●

The diamond-shaped sections have four main components; the Lamella bars, top and bottom purlins, and a pair of cover plates at each point of intersection.

●

All the units are of pressed steel and, generally, of channel section. The shape of the bar has been developed to give maximum strength as a strut with the least possible amount of material. Owing to this saving in weight, and the adaptability of the units for mass-production, the Lamella system is in the price range of ordinary steelwork for spans of 50 ft., and shows a greater advantage as the span increases.

Pumice Partitions Blocks

Pumice is, of course, a remarkably light material, and mixed with cement, in the proportion of 9 to 1, will produce a concrete that weighs only 37 lb. per cubic foot. Eonit pumice blocks, measuring 18 ins. by 9 ins. by 3 ins., weigh 10½ lb., and are, therefore, more easily handled and fixed, and impose less load on the frame, than building units composed of traditional solid materials.

●

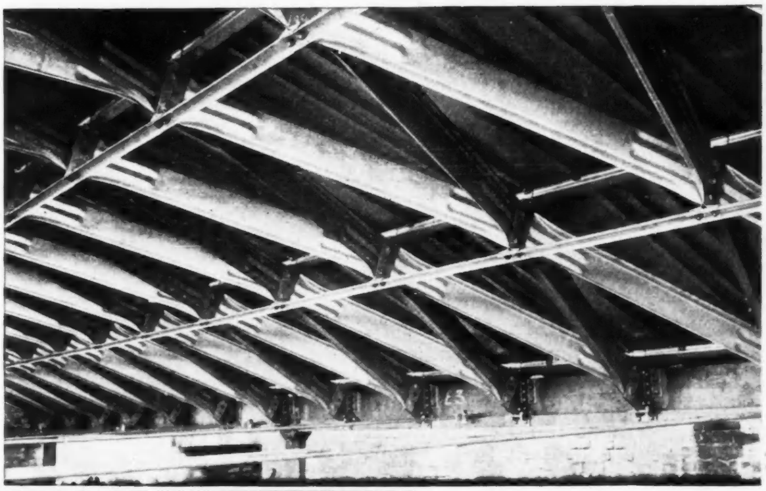
It has been estimated that in a building requiring 10,000 yards of partition blocks, a saving of 200 tons deadweight could be made by using Eonit.

●

The blocks are made in one standard size: 18 ins. by 9 ins., and in four standard thicknesses: 2 ins., 2½ ins., 3 ins., and 4 ins. Joints need be no more than ⅛ in. thick.

●

The pumice, being pure silica fused to a frothy sponge, contains no chemically active mineral, sulphur and other com-



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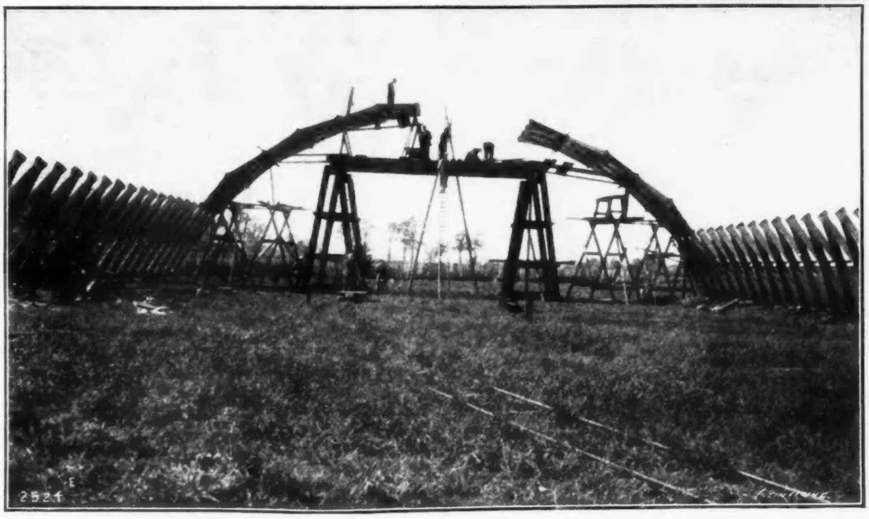

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1. *Diagrams showing Lamella bar and top purlin. The length of the bar can be varied over a range of 32 ins. to suit differing spans and types of roof covering.*
2. *A Lamella roof consists of diamond-shaped sections, with four main components: the Lamella bars, top and bottom purlins, and a pair of cover plates at each point of intersection. All the units are of pressed steel and, generally, of channel section.*
3. *Progress photograph of Lamella hangar at Heston airport.*

bustible substances having been expelled by heat.

•

Pumice is sometimes regarded as an unreliable background for wall plasters, but tests carried out on Eonit by the Department of Scientific and Industrial Research suggest that the view is erroneous.

•

In the course of tests, two of the partition slabs were plastered, in two coat work, on one face: one of the slabs in lime plaster (3 : 1 undercoat, neat finishing coat lightly gauged with plaster of Paris); the other in a calcium sulphate hard wall plaster of the retarded hemihydrate type (2 : 1 undercoat, neat finishing coat). No difficulty was experienced in the application of these plasters, the key was satisfactory, the plasters hardened up well and showed no sign of failure.

•

The pumice partition slabs would, therefore, appear to be suitable for use as a background for normal wall plasters.

•

The two slabs used for the plastering trial were painted on the plastered face with three coats of linseed oil paint, viz. a priming coat and two coats of prussian blue paint. One of the original unplastered specimens was painted in a similar manner. Two days after the application of the finishing coat, the slabs were each immersed in water to within half an inch from the painted surface, and were allowed to remain for seven days.

•

At the end of this period there was no sign of paint failure due to saponification on either the plain slab or the gypsum plaster slab. On the lime-plastered slab there was a very slight sign of bleaching and softening of the paint in two places at the extreme edge.

•

In view of these results and the very drastic conditions of the test, it is concluded that the pumice slabs can safely be plastered and decorated in the usual way. The slabs themselves do not appear to introduce any dangerous factor and, therefore, any risks there may be in the matter of decoration will be only those which are incidental to the nature and condition of the particular plaster used (i.e., its moisture and soluble salt content).

Unit Furniture

I have been asked by a reader for the address of Plan Furniture.

It is: 173 Oxford St., London, W.1.

OUR SECRETARIES

• 4 •

ERIC W. B. SCOTT

NORFOLK AND NORWICH ASSOCIATION OF ARCHITECTS

MR. ERIC W. B. SCOTT was born in Norwich in 1889, and, after serving his articles with his father, Mr. A. F. Scott, he was for a time in the office of Mr. A. W. S. Cross, M.A., F.R.I.B.A., in London, where he continued his studies at the Regent Street Polytechnic and at South Kensington.

In 1910 he joined his father in practice, opening an office in London, and after the war his brother, Mr. Theodore G. Scott, joined the firm, when it took the title of A. F. Scott and Sons.

In 1923, Mr. Scott visited America to study architecture and constructional methods, more particularly in relation to industrial buildings.

In association with the firm he has been successful in competitions for a Methodist church at Letchworth, a Savings Bank in Norwich, and the College of Technology and Art, Rotherham. The work of the firm has ranged over a large number of subjects, including Non-Conformist churches, factories, shops and domestic buildings.

Mr. Eric Scott is a member of the Practice Standing Committee of the R.I.B.A.; a foundation member of the Norwich Society, of which he has been secretary since its inception; and was for some years head lecturer in building construction at the Technical College, Norwich.

S. J. W.

IN PARLIAMENT

Housing Progress

MR. PRICE asked the Minister of Health if he would state the number of houses which had been built under the Housing (Rural Authorities) Act, 1931, to the latest convenient date.

Sir Hilton Young said that up to June 30 1933, the acceptance by 91 Councils of tenders for 1,599 houses had been authorized. He was unable to say how many of these houses had yet been completed.

Captain Heilgers asked the number of houses approved for reconstruction under the Housing (Rural Workers) Act during the last convenient three months, and the number for the corresponding period of last year.

Sir Hilton Young said that the number of dwellings in respect of which financial assistance under the Housing (Rural Workers) Acts, 1926 and 1931, was promised by local authorities in England and Wales during the three months ended March 31 last was 159. The number for the corresponding period last year was 186.

Percentage Increase in Rents

Mr. G. Hall asked the Minister of Labour if he could state what was the percentage increase in rents of controlled and of decontrolled working-class houses covered by the cost-of-living index, respectively, over the 1914 level, at July 1, 1931, October 1, 1932, and the latest date for which figures were available.

Sir H. Betterton said it was estimated that the average percentage increases, over the 1914 level, in the rents (including rates) of pre-war working-class dwellings taken into account in compiling the index-number were as follows:

At July 1, 1931: controlled 49, decontrolled 85 to 90.

At October 1, 1932: controlled 49, decontrolled 85.

At June 1, 1933: controlled 49, decontrolled 85.

Mr. Skelton informed Mr. N. Maclean that during the year ended December 31, 1932, the numbers of houses completed in Scotland were 11,631 by local authorities, 4,187 by assisted private enterprise, and 1,726 by unassisted private enterprise. During the first five months of 1933, 5,695 houses were completed by local authorities and 1,484 by assisted private enterprise.

St. Michael's Church, Tokyngton

Following are the names of the specialists, general contractors and some of the sub-contractors for St. Michael's Church, Tokyngton, near Wembley, illustrated in this issue (pages 41-43). Quantity surveyor: William C. Inman, P.A.S.I., M.I.STRUCT.E. General contractors, G. Bollom and Sons, Ltd. Sub-contractors: Henry C. Parker & Co., facing bricks; Stirling and Johnson, Ltd., roofing; Val de Travers Asphalte Paving Co., Ltd., asphalt; Dorman Long & Co., Ltd., structural steelwork; Henry Hope and Sons, Ltd., steel windows; London Pipeless Heating, Ltd., heating; Shackleton and Son, stone paving: Acme Flooring and Paving Co., Ltd., wood block flooring; Art Pavements and Decorations, Ltd., Biancola paving; John Daymond and Son, Ltd., stone inscription; Yannedis & Co., ironmongery; Tylors, Ltd., sanitary fittings; G. W. Franklin and Son, electrical installation; Gas Light and Coke Co., gas installation; J. W. Gray and Son, Ltd., lightning conductors; G. H. C. Foskett & Co., organ; W. A. Skinner, fencing; Newbury A. Trent, sculpture.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

Plans passed by the BARKING Corporation: Extensions, Broadway Market, for Mr. L. E. White; factory, Alfred's Way, for Block Batteries, Ltd.; four houses, Upney Lane, for Mr. J. R. Leftley; mission church, Goresbrook Road, and church, Vincent Road, for Bishop of Chelmsford; factory extension, Ripple Road, for Adelphi Press, Ltd.; hall, Ripple Road, for Salvation Army; boiler house, London Road, for Messrs. Fosbery & Co.

The BERMONDSEY B.C. is to erect flats on the Amos estate, at a cost of £31,000; on the Millpond estate, at a cost of £6,220, and on the Harold estate, at a cost of £20,246.

Plans passed at CROYDON: Nine houses, Stuart Road, for Lynton Building Co.; three shops, Spring Park Road, for Mr. C. Williams; alterations and additions, Church Path and Tamworth Road, for Lido, Ltd.; store, 89 George Street, for Mac Fisheries, Ltd.; six bungalows, Firsby Road, for Mr. P. Richardson; 46 houses, Beech Road, for Messrs. Reith & Co.; showrooms, shops and flats, 278–284 Lower Addiscombe Road, for Mr. A. D. Robinson; hall, St. James' Road, for Mr. T. F. W. Grant; shop, Brigstock Road, for Mr. E. Wallis-Long; two bungalows, Woburn Road, for Mr. W. S. Hover; two houses, Norwood Hill, for Mr. E. W. Wallis; six shops, Hermitage Lane, for Mr. C. W. E. Remnant; three houses, Duppas Hill Road, for Mr. W. G. Newton; two houses, Clarence Road, for Mr. F. Hayward; 20 garages, office, store and workshop, Handcroft Road, for Mr. A. Abbott; three houses, Bywood Avenue and Lower Addiscombe Road, for Messrs. Wylie and Berlyn; five houses, Grove Road, for Mr. C. H. Ridge; 40 houses, Davidson and Brampton Roads, for Mr. F. H. Willcocks; warehouse Church Street, for Messrs. Rees and Partners; alterations, "Duke of Clarence" public-house, Portland Road, for Messrs. Mullen and Lumsden; 14 houses, Ash Road, for Messrs. Chart, Son and Reading; 66 houses, Colin Close, for Gower Buildings, Ltd.; 28 houses, Turle and Stanford Roads, for Messrs. Truett and Steel, Ltd.; five houses, Howard Road, for Mr. W. Ernest; workshops, Cotford Road, for Mr. E. Wallis-Long; four houses, Hartland Way, for Hunt Construction Co.; 35 garages, Elm Close, for Mr. T. Grove.

Plans passed by the ENFIELD U.D.C.: Extensions, Summerfield works, Ponders End, for Messrs. Thos. Morson and Son, Ltd.; 54 houses, Brick Lane, for Mr. E. D. Judd; extensions, Cosmos Lamp Works, Millmarsh Lane, for Cosmos Lamp Works, Ltd.; two houses, Carterhatch Road, for Mr. G. Rowland; 20 houses, Larmans Road, for Messrs. W. Goodchild & Co.; 33 houses, Southfield Road, Ponders End, for Mr. G. W. Newman; four houses, Gt. Cambridge Road, for Mr. J. A. Judd; two factories, Queensway, Ponders End, for Churchbury Investment Co., Ltd.; 52 houses, off Turkey Street, for Mr. C. Cable; rusk factory, Golden Bread Bakery, Ponders End, for Mr. W. E. Duncan; showroom and shop, Sydney Road, for Mr. C. Parks.

SOUTHERN COUNTIES

The BRIGHTON Corporation has approved revised plans for the remodelling of the Dome and Corn Exchange, estimated at £60,000, and has asked the Pavilion Committee to appoint an architect to prepare the necessary drawings.

The BRIGHTON Corporation has asked Mr. John L. Denman to prepare plans and detailed estimates for the erection of a town hall and municipal offices, estimated to cost £250,000.

The BRIGHTON Corporation reports in favour of the establishment of a county lawn tennis ground, which is estimated to cost £15,000.

The HAMPSHIRE C.C. is to extend Tatchbury Mount colony by the provision of two villas, each providing accommodation for 60 mental defectives, at an estimated cost of £20,000.

MIDLAND COUNTIES

The GRIMSBY Corporation recommends that the tender of Messrs. P. and W. McLellan, Ltd., £34,434, be accepted for the provision of slipway appliances at the New Fish Dock.

Plans passed by the KIDDERMINSTER Corporation: Seven houses, Stourbridge Road, for Messrs. F. Hughes and Son; eight houses, Birmingham Road, for Mr. W. Lindley; two houses, Batham Street, for Mrs. R. E. Griffin; three houses, Chester Road, for Messrs. G. Thomas and Sons; additions, Mill Street, for Carpet Trades, Ltd.; new road and sewers, off Gheluvelt Avenue, for Mrs. L. Millar; three houses and shop, Stourport Road, for Mrs. Rollings; two houses, Sutton Park Road, for Mrs. Rollings; six houses, Birmingham Road, for Messrs. A. J. Crump and Sons; eight houses, Birmingham Road, for Mr. T. D. Edwards; two houses, Chester Road, for Mr. M. Harris; 26 houses, Birmingham Road, for Messrs. E. Leach and Co.; six bungalows, Mason Road, for Mr. G. S. Tomkinson; two houses, Goldthorn Road, for Messrs. Lacy Bros.; new road, Hurcott Road Estate, for Kidderminster Freehold Estates, Ltd.

The STOKE-ON-TRENT Corporation is considering plans for alterations and extensions at the Turnhurst Institution at a cost of £8,500, and at the London Road Institution at a cost of £9,000.

The STOKE-ON-TRENT Corporation Housing Committee has received sanction to borrow £16,800 for the erection of 56 houses on the Carmountside estate, and £15,600 for the erection of 52 houses on the Meir estate.

NORTHERN COUNTIES

Plans passed at CARLISLE: Alterations to shop, 61, English Street, for Messrs. A. Davies & Co.; extensions to wafer room, Railway Street, for Mr. H. E. Scarborough; additions to bakery, Shady Grove Road, for Mr. Foxall; two houses, Wigton Road, for Mr. R. Richardson; two houses, Belah Crescent, for Mr. A. W. Johnston; 18 houses, Freer Street, for Messrs. J. and R. Bell, Ltd.; extensions, Cumberland Infirmary, for Mr. S. W. B. Jack; extensions to Strathclyde House, Wigton Road, for Mr. H. E. Scarborough.

The JARROW Corporation is to seek sanction to proceed with the erection of 100 houses.

Plans passed by the MORECAMBE Corporation: New streets, off Longton Drive, for Messrs. Harrison and Moore; 16 houses, Lordsome Road, for Mr. W. Smith; seven houses, Trumacar Lane and Combermere Road, for Messrs. Wilson Bros.; four houses, Woodhill Lane, for Mr. W. Sanders; alterations to shop, 3, Winterdyne Terrace, for Mr. S. Wray; 30 houses, Branksome Drive, for Mr. H. Procter; two houses, Oxcliffe Road, for Mr. H. L. Moody.

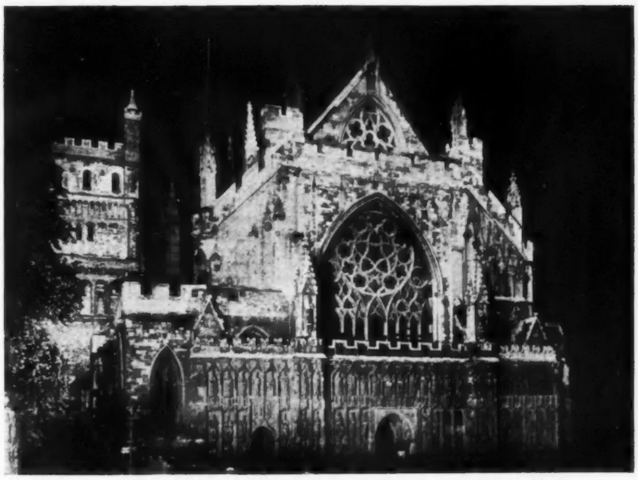
Plans passed by the SCARBOROUGH Corporation: Additions, infants' school, Convent of the Ladies of Mary, Queen Street, for Messrs. Jones and Rickaby; two houses, Peasholm Crescent, for Messrs. F. Mitchell and Sons; four houses, North Leas Avenue, for Messrs. Rennard and Marsden; six flats, The Crescent, for Mr. E. C. Tasker; two houses, North Leas Avenue, for Mr. F. Baker; alterations and additions, Clarence Gardens Hotel, Queen's Parade, for Mr. E. H. Robinson; flats, Esplanade Gardens, for Messrs. J. Petch and Son.

The SHIPLEY U.D.C. Housing Committee is to invite tenders for the erection of 20 A3 type houses, and 40 A2 type houses, on the Crag End estate.

Plans passed at SOUTHPORT: Two houses, Lawton Street, for Mrs. Ward; lay-out of Mill Lane, for Messrs. Thwaites; ballroom, Kingsway, for Mr. George Rose; two houses, Roe Lane, for Mr. T. Pickthall; shop and house, Preston New Road, for Mrs. Mosley; conversion into flats, 5, Knowsley Road, for Mr. S. McDowell; additions to pavilion, Falkland Road, for Scarisbrick Bowling Club, Ltd.; conversion into two flats, 126, Duke Street, for Mr. R. Heaton; additions to children's ward, Southport Infirmary, for the Board of Management; conversion into flats, 42, Park Avenue, for Misses C. and A. Martin.

The TODMORDEN Corporation is to obtain tenders for the erection of 54 houses on the Ashenhurst estate.

Plans passed by the TYNEMOUTH Corporation: Six houses, Mowbray Road, for Mr. S. Pye; four houses, Fern Avenue, for Messrs. J. W. and D. Brannen; 12 houses, North Chirton estate, for Messrs. F. R. N. Haswell and Son; 24 houses, Lynn Road, for Mr. T. Norris; two houses, Camp Terrace, for Mr. A. K. Tasker; two houses, Newcastle Coast Road, for Messrs. J. Carruthers and Son; shops and offices, Church Way, for Mr. C. P. Sherwin.



The front west of Exeter Cathedral, floodlit by Holophane units for the recent eight-hundredth anniversary celebrations. The units used were of similar type to those employed for Westminster Abbey and "Big Ben" on the occasion of the International Illumination Congress, held in 1931.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE ..	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny ..	S. Wales & M.	1 5	1 0¾
A_3	Abingdon ..	S. Counties	1 4	1 0
A	Accrington ..	N.W. Counties	1 5½	1 1¼
A_3	Addlestone ..	S. Counties	1 4	1 0
A	Adlington ..	N.W. Counties	1 5½	1 1¼
A	Airdrie ..	Scotland	*1 5½	1 1¼
C	Aldeburgh ..	E. Counties	1 1½	10¼
A	Altrincham ..	N.W. Counties	1 5½	1 1¼
B_3	Appleby ..	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone ..	Mid. Counties	1 4	1 0
B_2	Aylesbury ..	S. Counties	1 2½	11
B_1	BANBURY ..	S. Counties	1 3	11¼
B_1	Bangor ..	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley ..	Yorkshire	1 5½	1 1¼
B	Barnstaple ..	S.W. Counties	1 3½	11¾
A	Barrow ..	N.W. Counties	1 5½	1 1¼
A	Barry ..	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke ..	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley ..	Yorkshire	1 5½	1 1¼
A_3	Bedford ..	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley ..	Mid Counties	1 4½	1 0½
B	Bicester ..	S. Counties	1 2	10½
	Birkenhead ..	N.W. Counties	*1 7	1 2¼
A	Birmingham ..	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn ..	N.W. Counties	1 5½	1 1¼
A	Blackpool ..	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor ..	S. Counties	1 2½	11
A	Bolton ..	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth ..	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford ..	Yorkshire	1 5½	1 1¼
A_1	Brentwood ..	E. Counties	1 5	1 0¾
A	Bridgend ..	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater ..	S.W. Counties	1 3	11¼
A_1	Bridlington ..	Yorkshire	1 5	1 0¾
A	Brighouse ..	Yorkshire	1 5½	1 1¼
A_3	Brighton ..	S. Counties	1 4	1 0
A	Bristol ..	S.W. Counties	1 5	1 0¾
B_3	Brixham ..	S.W. Counties	1 2	10½
A_2	Bromsgrove ..	Mid. Counties	1 4½	1 0½
C	Bromyard ..	Mid. Counties	1 1½	10¼
A	Burnley ..	N.W. Counties	1 5½	1 1¼
A	Burslem ..	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton ..	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE ..	E. Counties	1 4½	1 0½
B_2	Canterbury ..	S. Counties	1 2½	11
A	Cardiff ..	S. Wales & M.	1 5½	1 1¼
A	Carlisle ..	N.W. Counties	1 5½	1 1¼
B	Carmarthen ..	S. Wales & M.	1 3½	11¾
B	Carnarvon ..	N.W. Counties	1 3½	11¾
A	Carnforth ..	N.W. Counties	1 5½	1 1¼
A	Castleford ..	Yorkshire	1 5½	1 1¼
B	Chatham ..	S. Counties	1 3½	11¾
B	Chelmsford ..	E. Counties	1 3½	11¾
A_3	Cheltenham ..	S.W. Counties	1 4	1 0
A	Chester ..	N.W. Counties	1 5½	1 1¼
A	Chesterfield ..	Mid. Counties	1 5½	1 1¼
B_2	Chichester ..	S Counties	1 2½	11
A	Chorley ..	N.W. Counties	1 5½	1 1¼
B_2	Cirencester ..	S. Counties	1 2½	11
A	Clitheroe ..	N.W. Counties	1 5½	1 1¼
A	Clydebank ..	Scotland	1 5½	1 1¼
A	Coalville ..	Mid. Counties	1 5½	1 1¼
A_3	Colchester ..	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett ..	N.E. Coast	1 5	1 0¾
A_2	Conway ..	N.W. Counties	1 4½	1 0½
A	Coventry ..	Mid. Counties	1 5½	1 1¼
A_2	Crewe ..	N.W. Counties	1 4½	1 0½
A	Cumberland ..	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen ..	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh ..	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury ..	Yorkshire	1 5½	1 1¼
B	Didcot ..	S. Counties	1 3½	11¾
A	Doncaster ..	Yorkshire	1 5½	1 1¼
B_2	Dorchester ..	S.W. Counties	1 2½	11
A_3	Driffield ..	Yorkshire	1 4	1 0
A_2	Droitwich ..	Mid. Counties	1 4½	1 0½
A	Dudley ..	Mid. Counties	1 5½	1 1¼
A	Dundee ..	Scotland	1 5½	1 1¼
A	Durham ..	N.E. Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale ..	S. Wales & M.	1 5	1 0¾
A	Edinburgh ..	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter ..	S.W. Counties	*1 4½	1 0½
B_1	Exmouth ..	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood ..	N.W. Counties	1 5½	1 1¼
B_2	Folkestone ..	S. Counties	1 2½	11
A	Frodsham ..	N.W. Counties	1 5½	1 1¼
B_2	Frome ..	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham ..	S. Counties	1 3½	11¾
A_2	Gloucester ..	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport ..	S. Counties	1 4	1 0
A_3	Grantham ..	Mid. Counties	1 4	1 0
A_1	Gravesend ..	S. Counties	1 5	1 0¾
A	Greenock ..	Scotland	*1 5½	1 1¼
A	Grimsby ..	Yorkshire	1 5½	1 1¼
B_1	Guildford ..	S. Counties	1 3	11¼
A	HALIFAX ..	Yorkshire	1 5½	1 1¼
A	Hanley ..	Mid. Counties	1 5½	1 1¼
A	Harrogate ..	Yorkshire	1 5½	1 1¼
A	Hartlepools ..	N.E. Coast	1 5½	1 1¼
B	Harwich ..	E. Counties	1 3½	11¾
B_2	Hastings ..	S. Counties	1 2½	11
A_2	Hatfield ..	S. Counties	1 4	1 0
B	Hereford ..	S.W. Counties	1 3½	11¾
A_3	Hertford ..	E. Counties	1 4	1 0
A	Heysham ..	N.W. Counties	1 5½	1 1¼
A	Howden ..	N.E. Coast	1 5½	1 1¼
A	Huddersfield ..	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY ..	Yorkshire	1 5½	1 1¼
A	Immingham ..	Mid. Counties	1 5½	1 1¼
A_3	Ipswich ..	E. Counties	1 4	1 0
B_3	Isle of Wight ..	S. Counties	1 2	10½
A	JARROW ..	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY ..	Yorkshire	1 5½	1 1¼
B	Kendal ..	N.W. Counties	1 3½	11¾
B	Keswick ..	N.W. Counties	1 3½	11¾
A_2	Kettering ..	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn ..	E. Counties	1 2½	11
A	LANCASTER ..	N.W. Counties	1 5½	1 1¼
A_1	Leamington ..	Mid. Counties	1 5	1 0¾
A	Leeds ..	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester ..	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield ..	Mid. Counties	1 4½	1 0½
A	Lincoln ..	Mid. Counties	1 5½	1 1¼
	Liverpool ..	N.W. Counties	*1 7	1 2¼
A_2	Llandudno ..	N.W. Counties	1 4½	1 0½
A	Llanelly ..	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton ..	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham ..	N.W. Counties	1 5½	1 1¼
A_1	MACCLES-FIELD	N.W. Counties	1 5	1 0¾
B	Maidstone ..	S. Counties	1 3½	11¾
A_3	Malvern ..	Mid. Counties	1 4	1 0
A	Manchester ..	N.W. Counties	1 5½	1 1¼
A	Mansfield ..	Mid. Counties	1 5½	1 1¼
B_1	Margate ..	S. Counties	1 3	11¼
A_3	Matlock ..	Mid. Counties	1 4	1 0
A_1	Merthyr ..	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich ..	N.W. Counties	1 4½	1 0½
B_2	Minehead ..	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe ..	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH ..	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson ..	N.W. Counties	1 5½	1 1¼
A	Newcastle ..	N.E. Coast	1 5½	1 1¼
A	Newport ..	S. Wales & M.	1 5½	1 1¼
A	Normanton ..	Yorkshire	1 5½	1 1¼
A_1	Northampton ..	Mid. Counties	1 5	1 0¾
A	North Staffs. ..	Mid. Counties	1 5½	1 1¼
A	North Shields ..	N.E. Coast	1 5½	1 1¼
A_2	Norwich ..	E. Counties	1 4½	1 0½
A	Nottingham ..	Mid. Counties	1 5½	1 1¼
A	Nuneaton ..	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM ..	Mid. Counties	1 4	1 0
A	Oldham ..	N.W. Counties	1 5½	1 1¼
A_3	Oswestry ..	N.W. Counties	1 4	1 0
A_2	Oxford ..	S. Counties	1 4½	1 0½
A	PAISLEY ..	Scotland	*1 5½	1 1¼
B_3	Pembroke ..	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth ..	S.W. Counties	*1 5½	1 1¼
A	Pontefract ..	Yorkshire	1 5½	1 1¼
A_1	Pontypridd ..	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth ..	S. Counties	1 4	1 0
A	Preston ..	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING ..	S. Counties	1 4½	1 0½
B	Reigate ..	S. Counties	1 3½	11¾
A_3	Retford ..	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale ..	N.W. Counties	1 5½	1 1¼
B	Rochester ..	S. Counties	1 3½	11¾
A_1	Ruabon ..	N.W. Counties	1 5	1 0¾
A	Rugby ..	Mid. Counties	1 5½	1 1¼
A_3	Rugeley ..	Mid. Counties	1 4	1 0
A	Runcorn ..	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS ..	E. Counties	1 4½	1 0½
A	St. Helens ..	N.W. Counties	1 5½	1 1¼
B_3	Salisbury ..	S.W. Counties	1 2	10½
A_1	Scarborough ..	Yorkshire	1 5	1 0¾
A	Scunthorpe ..	Mid. Counties	1 5½	1 1¼
A	Sheffield ..	Yorkshire	1 5½	1 1¼
A	Shipley ..	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury ..	Mid. Counties	1 4½	1 0½
A_2	Skipton ..	Yorkshire	1 4½	1 0½
A_3	Slough ..	S. Counties	1 4	1 0
A_2	Solihull ..	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport ..	N.W. Counties	1 5½	1 1¼
A	S. Shields ..	N.E. Coast	1 5½	1 1¼
A_2	Stafford ..	Mid. Counties	1 4½	1 0½
A	Stockport ..	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud ..	S.W. Counties	1 3½	11¾
A	Sunderland ..	N.E. Coast	1 5½	1 1¼
A	Swadlincote ..	Mid. Counties	1 5½	1 1¼
A	Swansea ..	S. Wales & M.	1 5½	1 1¼
A_3	Swindon ..	S.W. Counties	1 4	1 0
A_1	TAMWORTH ..	N.W. Counties	1 5	1 0¾
B	Taunton ..	S.W. Counties	1 3½	11¾
A	Teesside Dist...	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth ..	S.W. Coast	1 4	1 0
A	Todmorden ..	Yorkshire	1 5½	1 1¼
A_1	Torquay ..	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall ..	Mid. Counties	1 5½	1 1¼
A	Tyne District ...	N. E. Coast	1 5½	1 1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall ..	Mid. Counties	1 5½	1 1¼
A	Warrington ..	N.W. Counties	1 5½	1 1¼
A_1	Warwick ..	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby ..	Yorkshire	1 4½	1 0½
A	Widnes ..	N.W. Counties	1 5½	1 1¼
A	Wigan ..	N.W. Counties	1 5½	1 1¼
B_1	Winchester ..	S. Counties	1 3	11¼
A_3	Windsor ..	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester ..	Mid. Counties	1 4½	1 0½
A	Worksop ..	Yorkshire	1 4	1 0
A_1	Wrexham ..	N.W. Counties	1 5	1 0¾
A_3	Wycombe ..	S. Counties	1 4	1 0
B_1	YARMOUTH ..	E. Counties	1 3	11¼
B_1	Yeovil ..	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2¼
General Labourer	,,		1	2¼
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	,,		7	6
Building Sand	,,		7	9
Washed Sand	,,		8	9
2" Broken Brick	,,		8	3
¾" ,, ,,	,,		11	6
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4"		6"	
		s.	d.	s.	d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	[illegible]	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	9	2	6
,, Wirecuts	,,	8	2	6
,, Brindles	,,	7	6	6
,, Bullnose	,,	9	14	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	8	8	0
Luton Facings	,,	8	0	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	26	0	0
,, green	,, ,,	27	15	0
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		19	0
,, ⅞"	,,	1	1	6
,, 1"	,,	1	3	6
,, 1¼"	,,	1	7	6
,, 1½"	,,	1	12	0
Deal matchings ⅝"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1½"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1¼"	2"
Tubes, 2'-14' long	per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61¼	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ⅜"	,,	8	6
,, ,, ½"	,,	8	3
,, ,, ⅝"	,,	8	0
,, ,, ¾"	,,	7	6
,, ,, ⅞"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3"		4"	
		s.	d.	s.	d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	,,	5	0	8	6
Boots	,,	3	3	4	5
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	2	0
,, drawn pipes	,,		19	0
,, soil pipe	,,	1	6	0
,, scrap	,,		14	6
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			10½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3"		4"		6"	
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2⅞
,, ,, 26 oz. ,, ,, ,,	,,					3⅜
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
¼" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	1
Boiled oil	,,		2	3
Turpentine	,,		4	9
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black			7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
„ to reduce levels n/e 5' 0" deep and cart away	Y.C.		8	6
„ to form basement n/e 5' 0" deep and cart away	„		9	0
„ „ 10' 0" deep and cart away	„		9	6
„ „ 15' 0" deep and cart away	„		10	0
If in stiff clay . . . add	„		2	6
If in underpinning . . . „	„		4	0
Digging, return, fill and ram . . . „	„		4	0
Planking and strutting to sides of excavation	F.S.		1	0
„ „ to pier holes	„			5
„ „ to trenches	„			5
„ „ extra, only if left in	„			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	„	1	6	0
„ „ „ (4-2-1)	„	1	12	6
„ „ „ underpinning	„	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and gratings	„	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
„ „ in cement	„	29	15	0
„ Stocks in cement	„	35	15	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			5½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	„	6	9
¾" paving or flat	„	4	0
1" paving or flat	„	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

			s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	„	3	7	0
Do., 24" × 12"	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles	„	2	16	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" „ „ „ „	„	1	17	6
1¼" „ „ „ „	„	2	3	0
¾" × 2" fir battening for Countess slating	„		9	6
Do. for 4" gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" „ „ „ „ „	„		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	„	2	12	6
1½" do.	„	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1¼" do.	„		1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" „ „	„	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	3	9
2" „ „ „	„	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" „ „ „	„	2	8
1½" „ but moulded both sides	„	2	4
2" „ „ „	„	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" „ „	„	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½" deal moulded wall strings	„	2	1
1½" „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" „ „	„	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	16	6
Do. in flashings		1	19	0
Do. in covering to turrets, etc.	„	2	6	0
Do. in soakers	„	1	12	0
Labour to welted edge	F.R.			3½
Open copper nailing	„			3½
Close „ „	„			4½

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	„	6½	8	9	11	1 3	—
Boiler screws and unions	„	3 3	3 9	5 0	8 0	—	—
Lead traps	„	—	—	—	6 3	8 9	—
Screw down bib valves	„	6 9	9 6	11 0	—	—	—
Do. stop cocks	„	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

			s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	9
Do. vertical	„		2	3
Rough render on walls	„		1	4
Render, float and set in lime and hair	„		2	0
Render and set in Sirapite	„		2	2
Render, backing in cement and sand, and set in Keene's cement	„		3	1
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R.			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1" girth	„			1½
1" granolithic pavings	Y.S.		3	6
1½" „	„		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	„		17	6
9" × 3" „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

PAINTER

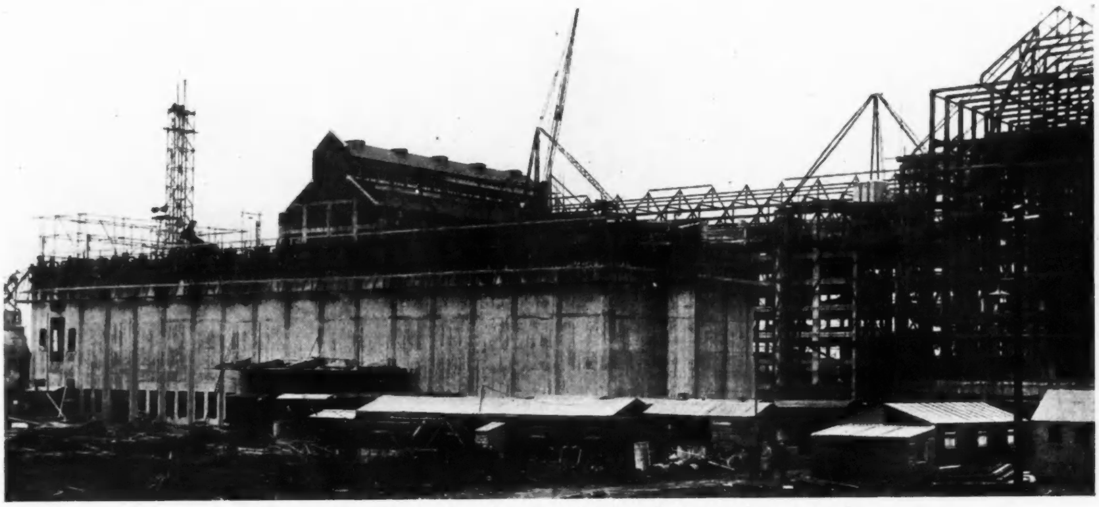
		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . from	„	2	9

Indexed

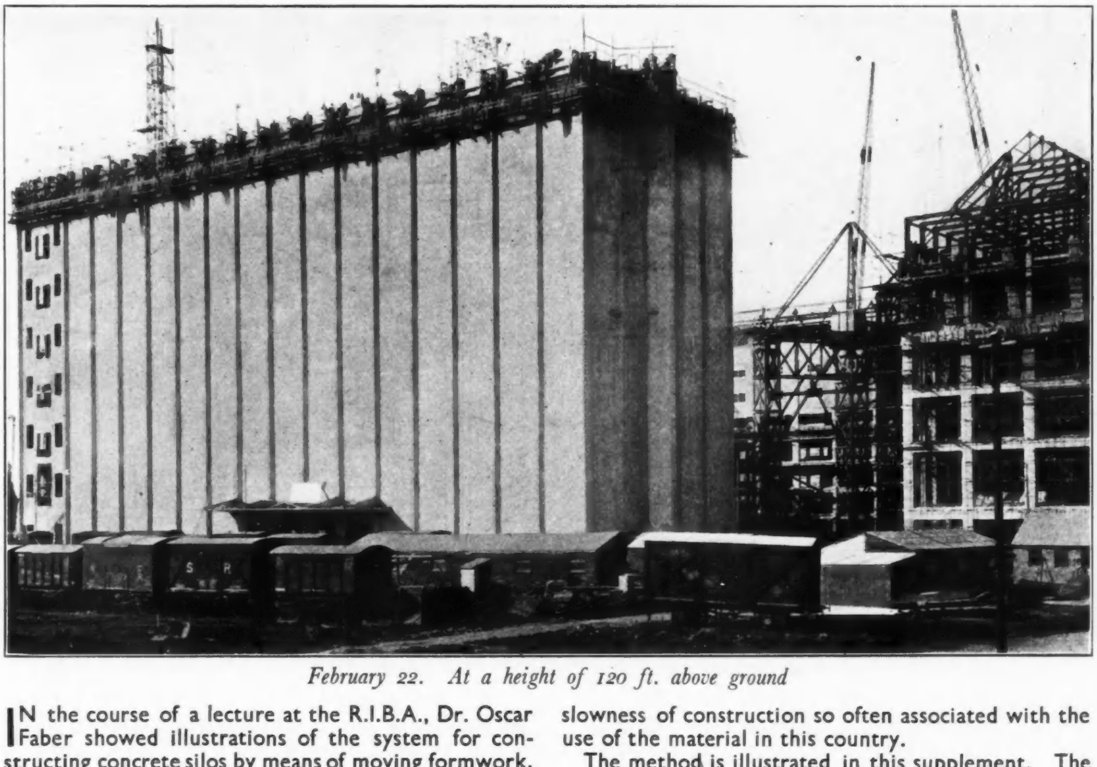
Supplement to THE ARCHITECTS' JOURNAL for July 13, 1933

MOVING-FORM CONSTRUCTION

GRAIN SILOS: :DESIGNED BY DR. OSCAR FABER



February 6. The grain silos at a height of 40 ft. above ground



February 22. At a height of 120 ft. above ground

IN the course of a lecture at the R.I.B.A., Dr. Oscar Faber showed illustrations of the system for constructing concrete silos by means of moving formwork, and suggested that architects and engineers might, with advantage, collaborate in investigating the possibilities of the application of this method to such buildings as blocks of offices or flats. By this means advantage could be taken of the economies of reinforced concrete without the disadvantage of slowness of construction so often associated with the use of the material in this country.

The method is illustrated in this supplement. The principle is that of placing the concrete in a shallow mould of the same size in plan as the building to be constructed and, after allowing sufficient time for this concrete to take its initial set, of keeping this mould moving vertically upwards slowly and continuously. The lifting is done by screw jacks attached to the

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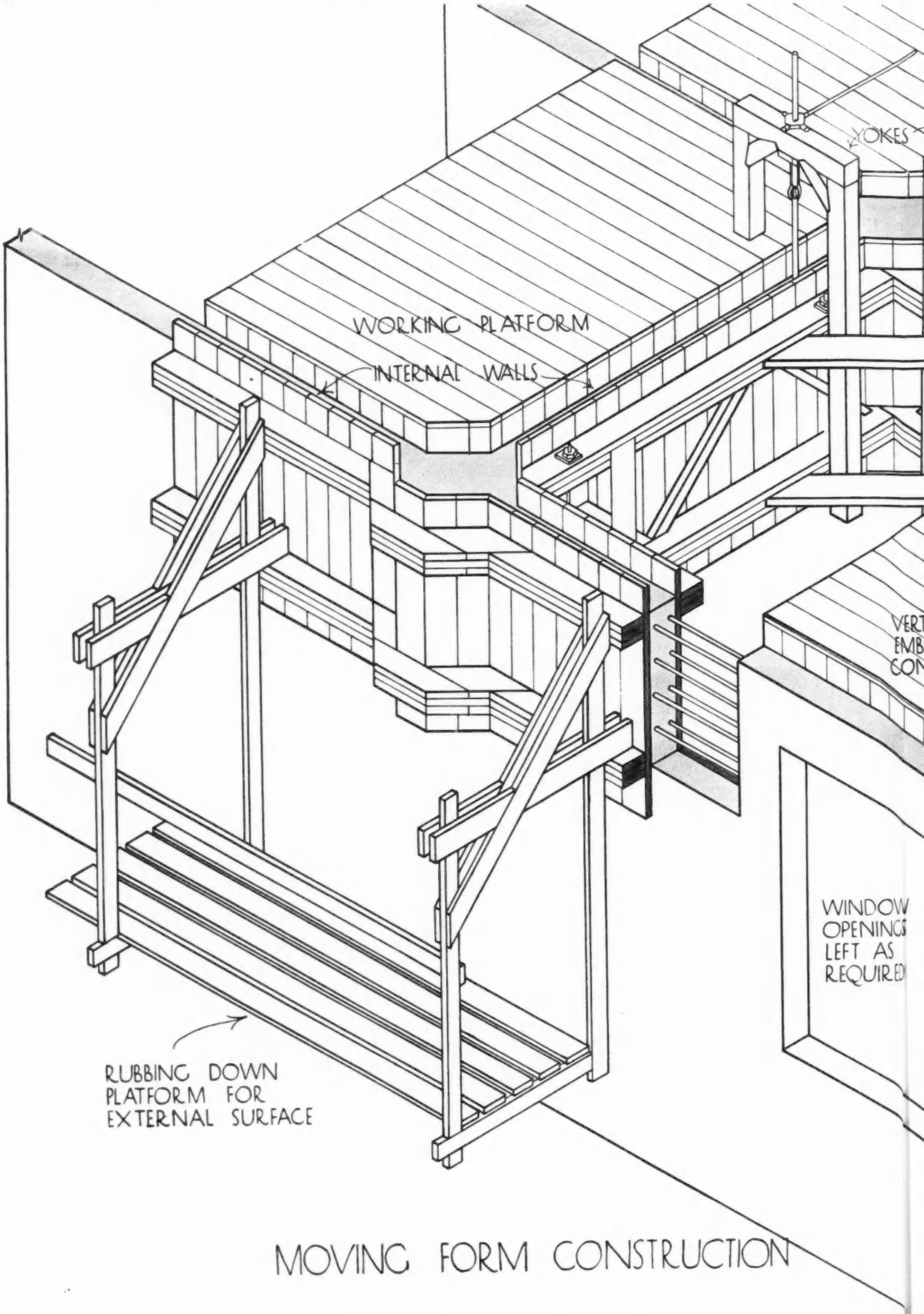
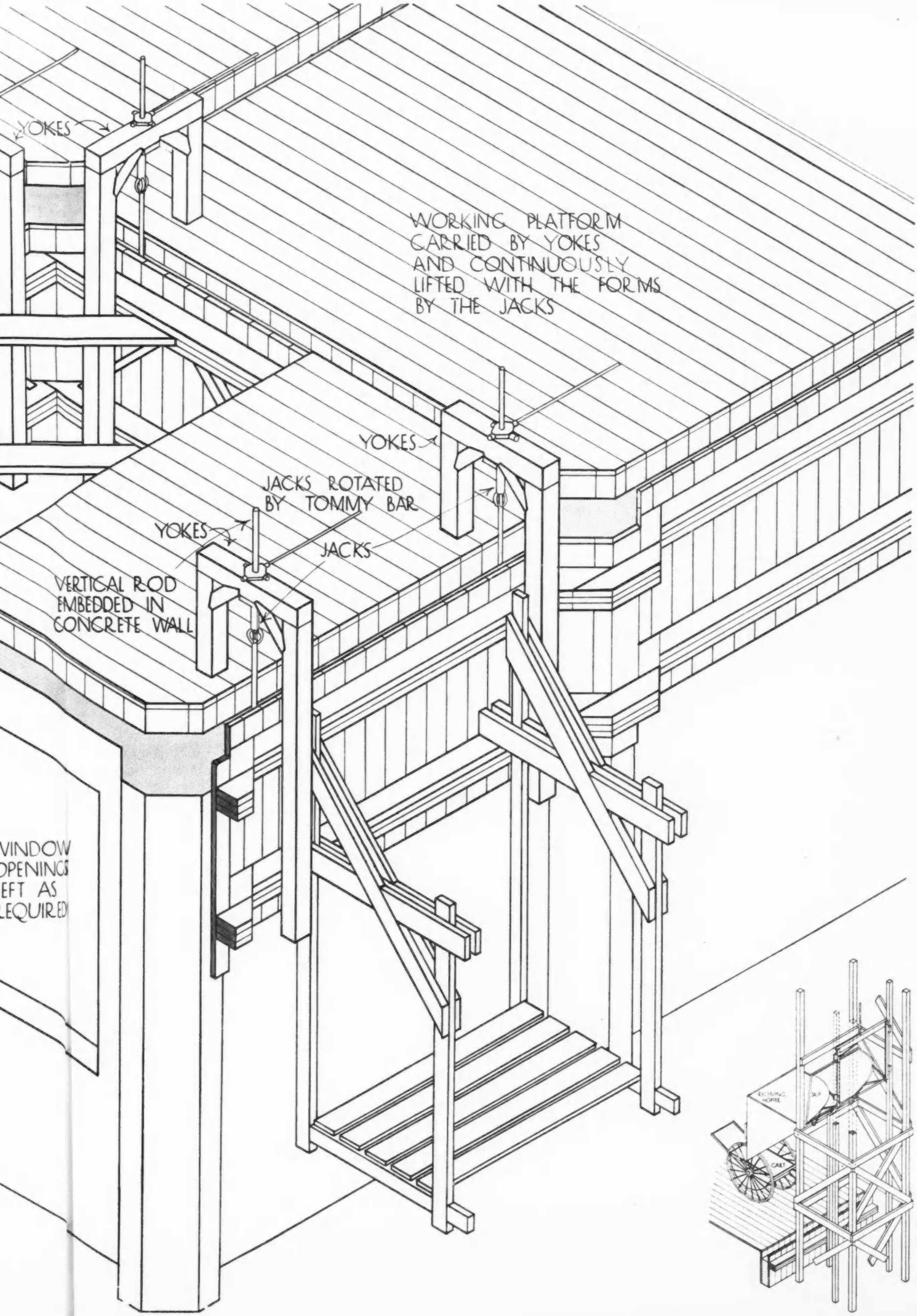
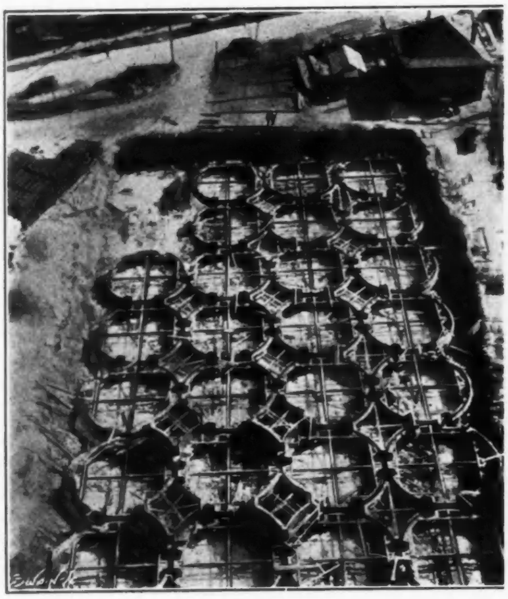

YOKES
WORKING PLATFORM
INTERNAL WALLS
VERT
EMB
CON
WINDOW
OPENINGS
LEFT AS
REQUIRED
RUBBING DOWN
PLATFORM FOR
EXTERNAL SURFACE

MOVING FORM CONSTRUCTION


YOKES
WORKING PLATFORM CARRIED BY YOKES AND CONTINUOUSLY LIFTED WITH THE FORMS BY THE JACKS
YOKES
JACKS ROTATED BY TOMMY BAR
YOKES
JACKS
VERTICAL ROD EMBEDDED IN CONCRETE WALL
VINDOW OPENINGS EFT AS EQUIRED
RECEIVING HOPPER
SKIP
CART



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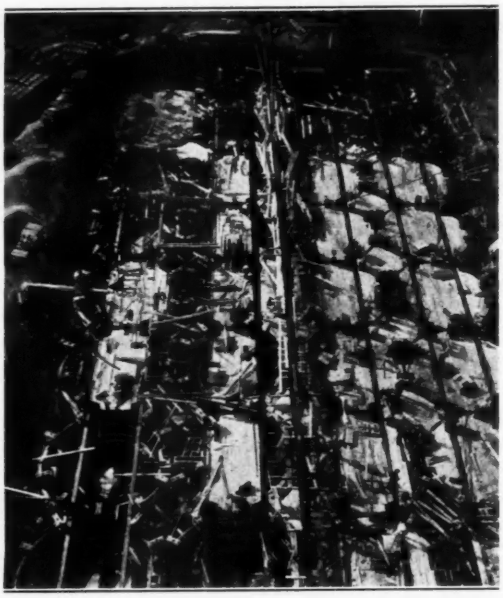
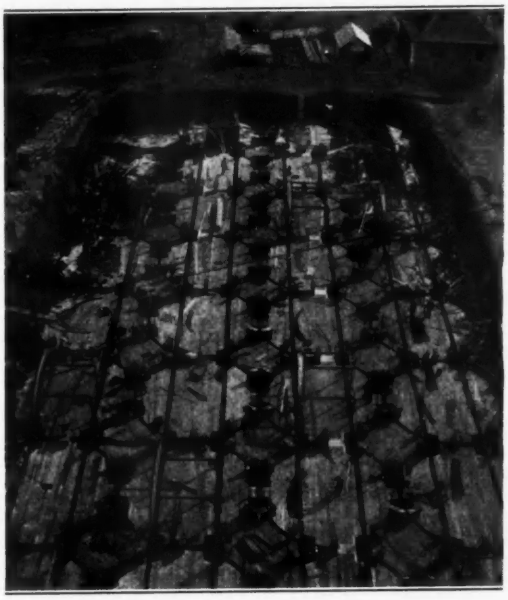


2

forms by yokes, the weight being carried by steel rods set in the concrete walls as construction proceeds.

All work is done from a working platform, covering the whole area of the building between the walls, which moves upwards with the forms and becomes, if necessary, the shuttering for the underside of the roof slab. Rubbing down, or any other surface treatment, is done from a scaffold suspended from this platform.

To find satisfactory forms of surface finish and wall insulation, would be the most important problems to be solved if the method were applied to blocks of offices, flats, etc.



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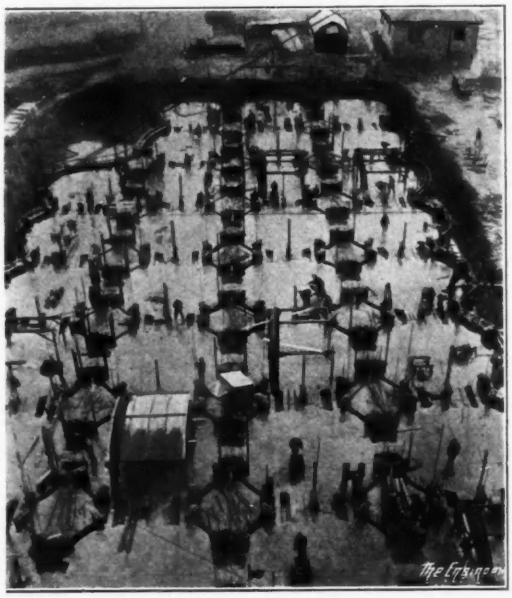


4

1. *Erection of moving form frames.*

2. *Forms partly floored over.*

3. *Forms floored over, forming working platform ready for concreting.*

4. *Concreting in progress.*

[*Photos : " The Engineer "*

FLOOR LOADS (L B A WAIVERS 1932)

OFFICE BOOK SHEET Nº 39-1.

Section 35 (a) Dead load.

In all cases of floors where the positions of partitions are not definitely located in the design a uniformly distributed load sufficient to allow for them is to be added to the dead floor load. For all floors of rooms used for offices, the minimum total allowance for internal partitions shall be at the rate of 20 lbs per square foot of floor area.

Section 35 (b)

Superimposed load. For the purpose of calculating the loads on foundations, pillars, piers, walls & beams in buildings, the minimum superimposed load on each floor & on the roof shall be estimated as equivalent to the following dead load:

	1 lb per sq. ft of floor area (excluding any allowance for partitions).
Rooms used for domestic purposes, hotel bedrooms, hospital rooms & wards	40.
Offices, floors above entrance floor	50.
Offices, entrance floor & floors below entrance floor	80.
Churches, schools, reading rooms, art galleries & similar uses	70.
Retail shops & garages for cars of not more than 2 tons dead w't.	80.
Assembly halls, drill halls, dance halls, gymnasia, light workshops, public spaces in hotels & hospitals, staircases & landings, theatres, cinemas, restaurants & grand stands	100.
Warehouses, book stores, stationery stores, & similar uses, together with garages for motor vehicles exceeding 2 tons dead weight: actual load to be calculated, but not less than	200.
	1 lb per sq. ft. of covered area
Flat roofs & roofs inclined at an angle with the horizontal of not more than 20°	30

On roofs inclined at an angle with the horizontal of more than 20° a minimum superimposed load, (deemed to include the wind load) of 15 lbs per sq. ft of surface shall be assumed acting normal to the surface inwards on the windward side, & 10 lbs per sq. ft. of surface similarly acting outwards on the leeward side, provided that this requirement shall apply only in the design of the roof structure.

Section 35 (d). Reduction of superimposed load.

For the purposes of calculating the total load to be carried on foundations, pillars, piers & walls in buildings of more than 2 storeys in height, the superimposed loads for the roof & topmost storey shall be calculated in full in accordance with the schedule of loading, but for the lower storeys a reduction of the superimposed loads may be allowed in accordance with the following table:

Next storey below topmost storey	10 %	reduction of its superimposed load
Next storey below	20 %	" " " " "
Next storey below	30 %	" " " " "
Next storey below	40 %	" " " " "
Each succeeding storey	50 %	" " " " "

The above reduction may be made by estimating the proportion of floor area carried by each foundation, pillar, pier & wall. No such reductions shall be allowed on any floor scheduled for an applied loading of 100 lbs or more per square ft.

Section 35 (c.)

All floor beams shall be capable of carrying in any position on an otherwise unloaded floor a concentrated load as follows:

	Alternative Concentrated load (tons)
Entrance floors & floors below the entrance floor of office buildings	2.
Garage floors for motor vehicles	1·5 x max. wheel load but not less than 1. ton.
Other floors (except those for applied load of 40 lbs per square foot).	1.
Floors scheduled for an applied load of 40 lbs per square foot.	½.

The above alternative concentrated loads may be considered in each case as equally distributed over a floor area of 2'6" square. In the case of subsidiary floor beams entirely embedded in concrete & spaced not wider than 3'0" c to c., the concentrated load may be regarded as borne equally between two beams.

WEIGHTS OF MATERIALS (in lbs per cub. ft.)

Aluminium	average	166.
Asbestos		150.
Ashes	(coal)	45.
Ashlar	see Masonry	
Asphalte		145.
Ballast	brick or gravel	112.
Brass	average	530
Brickwork	pressed	140.
	ordinary	120.
	soft	100.
	cellular fletton	90.
Bronze		524.
Cement	portland, loose	90.
Chalk		120.
Clay	damp	125.
Coal		52.
Coke		30.
Concrete	ballast, reinforced	150.
	brick	120.
	breeze	90.
	stone	144.
Copper	average	550.
Cork		15.
Earth	vegetable, dry	90.
	moist	100.
	wet	105.
Flint		165.
Glass	plate	174.
	rough	168.
	sheet	156.
Granite	average	165.
Gravel	clean	112.
	with clay	130.
Gypsum		450.
Iron	cast	450.
	wrought	480.
Lead	average	710.
Lime	average	64.
Limestone		140.
Macadam		150.
Marble		165.
Masonry	concrete, stone	144.
	concrete, brick	96.
	freestone, dressed	150.
	freestone, rubble	140.
	granite, dressed	165.
	granite, rubble	155.
Mortar	average	105.
Mud	wet	110.
Nickel	monel metal	556.
Plaster of paris	set	80.
Plaster		96.
Rock	loose	100.
Sand	fine, dry, loose,	100.
	consolidated	120.
	wet	130.
Sandstone	average	144.
Setts	granite, average	165.
	yorkshire, average	140.
Slag	for concrete	96.
Slate	average	170.
Snow	fresh	8.
	wet compact	20.
Steel		490.
Shingle		88.
Tar		64.
Terracotta	solid	120.
Terracotta	hollow	65.
Tile		114.
Timber	Ash, average	48.
	Elm "	38.
	Fir "	32.
	Greenheart "	65.
	Jarrah "	60.
	Mahogany "	45.
	Oak, English	50.
	Oak, American	54.
Timber, cont.	pine, red, average	35.
	pine, white "	28.
	pine, yellow "	30.
	pine, pitch "	45.
	Teak "	46.
Tin	average	457.
Water	fresh	62·5.
	sea	64.
Wood block		42–56.
Zinc		440.

ROOFING MATERIALS (in lbs per sq. foot)

Asphalte	per ½" thickness	6.
Asphalted felt	per ⅛" "	1.
Boarding 1"		3.
Cedar shingles	average	4.
Copper	"	1½
Corrugated asbestos		5½.
Lead	6 lb, with rolls	8.
Patent glazing	according to span.	6–13½
Tiles,	plain 3/8 – 5/8	10–16.
	Italian, ridge & furrow	14.
	pantiles, 3½" lap.	10.
	pantiles, bedded	14.
Tiling battens	4" gauge	4.
Thatch		7.
Shingles	Oak average	5.
	Copper "	3.
Slates	3/16 – 3/8	7–14.
Stone	thin slabs	18
Ruberoid	average	½.
Zinc	average	1½
BRICKWORK (Weights given are for ordinary brick.)	4½" solid in cement	45.
	9" " " "	90.
	14" " " "	135.
	18" " " "	180.
	14" Holbric backing	90.
	14" Cellular Flet. "	90.
	14" 2½" moler backing	80.
	14" hollow tile	100.

INFORMATION SHEET: WEIGHTS OF MATERIALS AND L.C.C. (1932) FLOOR LOADS.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1

INFORMATION SHEETS

• 25 •

FLOOR LOADS, ETC.

•

THIS week's Information Sheet—containing L.C.C. floor loads and weights of materials—is of special interest in view of the article on Weight Saving in Frame Buildings that appears on page 55 of the Information supplement in the body of the issue.

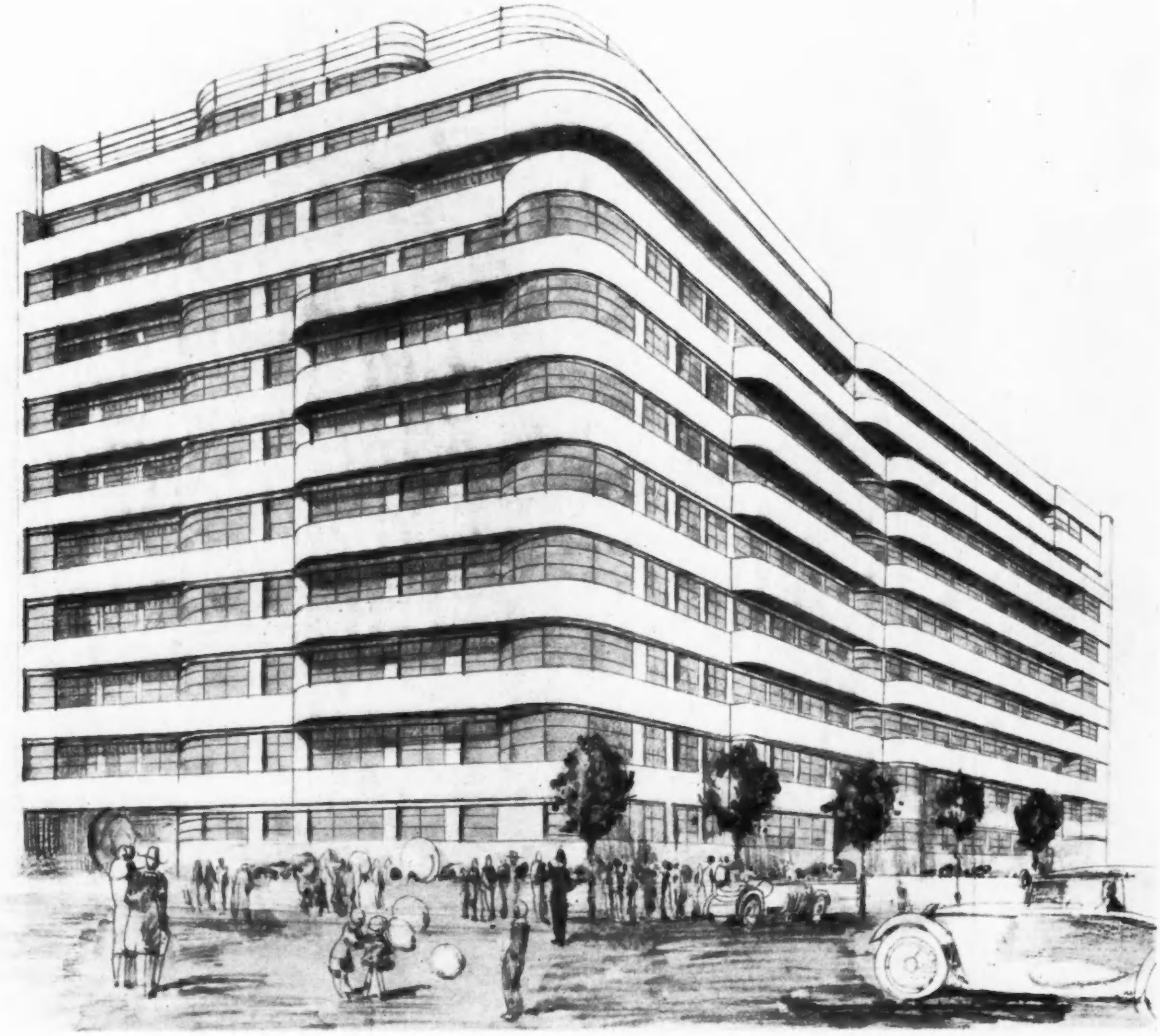
The ninth, and last, of the Sheets devoted to staircases, will be published next week.

The following is a full list of the subjects previously issued:—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units.
13. Apr. 12—Lavatory Units.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes.
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs: 1.
23. June 29—Concrete Stairs: 2.
24. July 6—Pressed Steel Stairs: 1.

A BLOCK OF FLATS AT BRIGHTON

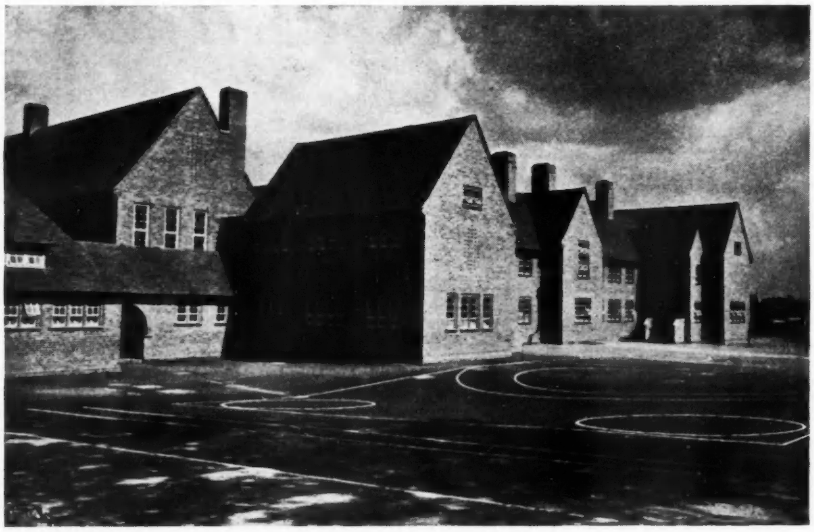
DESIGNED BY BERTRAM CARTER AND SLOOT

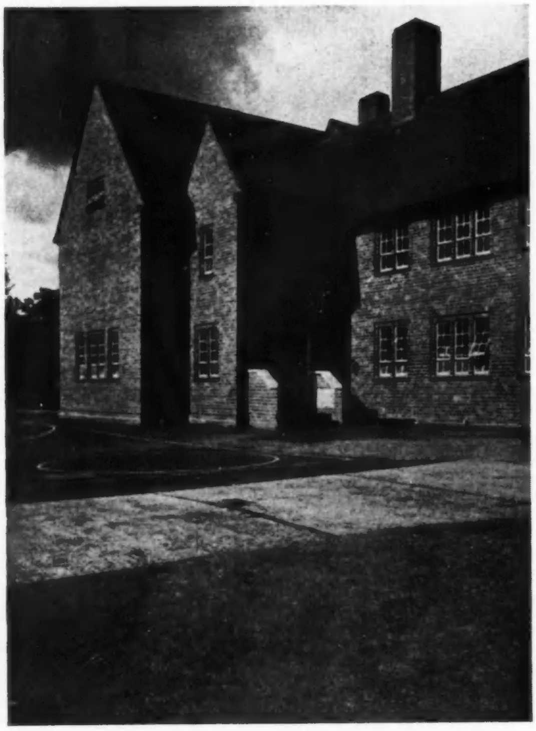


THE site chosen for the erection of these flats lies on the boundary between Brighton and Hove. It directly overlooks the gardens of the Promenade and every flat has a view of the sea. Every flat, with the exception of three, also has its own balcony.

The windows, with radiators beneath, extend the complete width of the rooms. These radiators are of low temperature, but give a high degree of radiation. Convection will only be sufficient to check any downward movement of air from the large glass area. The general construction is of steel frame and concrete and rendered with Snowcrete.

There will be sufficient covered space to house 60 cars under the building, from whence there is direct access to the flats by lift.



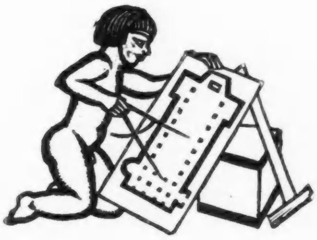


This school has been designed by the Middlesex county architect, and is typical of the sound work in the English rural tradition that is quietly being put up in our midst by official architects.

Plans and further photographs will be found in this week's supplement.

DESIGNED BY W. T. CURTIS

OAKWOOD SCHOOL, SOUTHGATE



THE ADVERTISING EXHIBITION

Olympia—July 17 - July 24

THE Advertising and Marketing Exhibition at Olympia this week is full of the inspiriting suggestion that commerce is being educated to appreciate planning. This is the third Advertising Exhibition. There was one in 1921, at the White City, full of organized stuntmongering and ballyhoo; there was another in 1927, laid out by Joseph Emberton and made into a civilized and intriguing show by that most able designer and by the particular genius of the late Sir Lawrence Weaver, who was actively concerned with the organization. This third exhibition has also been planned by Mr. Emberton, and the lay-out of the Main Hall of Olympia is admirable, sufficient control being retained over the form of the stands to secure an effect of great spaciousness, which is enhanced by the imposition of a uniform colour for the exteriors.

The individual design of stands illustrates three main reactions to the control of the exhibition architect. Some exhibitors have been paralyzed into quite unnecessary dullness; others have been truculently self-assertive within the limits permitted. The rather overcrowded stand of the B.B.C. sins badly in this way, and some particularly crude symbolic decoration suggesting waves complicates its background. Another exhibitor has dumped an indifferent model of a lighthouse at the corner of a stand; and there are a few more archaic monstrosities of this kind. But the best stands are those produced by exhibitors who have appreciated that they were creating an advertisement in three dimensions. This last class includes the stands of the more progressive advertising agencies, the great national newspapers (notably *The Times*) and a few printers.

Seven years ago a book on the future of advertising* appeared which began with this disgruntled statement: "For the most part the public is ill-informed about Advertising: for the rest it is misinformed. The intelligent public is particularly ill-informed." After the 1927 Exhibition the public might reasonably have retained their traditional belief that advertising was all brain-waves, slogans, hot-air, puffs and high-pressure sex-stuff; but this exhibition should alter that now old-fashioned view. Most of the exhibits indicate a regard for clear statements of fact, and for what can only be described as the intelligent dramatization of common sense. They show a large respect for planning, and clearly they represent an immense volume of research work. If commerce is developing this lucid, scrutinizing character, then commerce will become a more enlightened patron of architecture in the future. The dramatized statistics of markets and people, employment, unemployment and industrial output all hint that social and economic problems are being considered with a calm, unemotional appreciation of facts, and when facts are apprehended in the laboratory spirit of creative research, unfogged by prejudice, some interesting possibilities of a more balanced and agreeable form of civilization are revealed. The working model of a potent instrument for the social re-ordering of England can be seen at Olympia by those who have imagination and a concern for the future.

Incidentally some attention has been given to the details of living in the near future, and a forecast of shopping in 1950 is the most interesting individual feature of the exhibition. It takes the form of a shop in which everything is sold in packets, and it is run on the cafeteria system. Shoppers guide a little tray along rails past the displayed goods, help themselves, and pay when they leave and the contents of their tray are checked and wrapped. The shop of 1950 is called a *Packeteria* and is another piece of Mr. Emberton's ingenuity, a glittering compound of glass, polished aluminium and streamlined traffic ways for the shopper. Mingling with such stimulating inventiveness is all the apparatus of planlessness; all the disrupting things that afflict our cities, from sky-writing mechanism to hideous posters; but the intelligence and ability that could enable commerce to plan its enterprises in a civilized way are there too, waiting to be used. The machine-made uplift about "service" has been largely discarded by the more intelligent practitioners in advertising; and there is a refreshing concentration on commercial, social, industrial and economic realities. But does the will exist in the world of commerce to employ these who are trained to plan?

---

* *Nuntius, Advertising and its Future,* by Gilbert Russell.

The Architects' Journal
9 Queen Anne's Gate
Westminster, S.W. 1
Telephone: Victoria
6 9 3 6
Telegrams:
Buildable
Parl.
London

●

NOTES & TOPICS

THE BRICK CEMETERY

IN the grounds of the Building Research Station at Garston, near Watford, is a brick cemetery.

*

Architects should take advantage of any opportunities which may offer to go and see for themselves the deplorable condition of some of the bricks.

*

The bricks are planted in the open, where they are exposed to rain and fog. Some have nearly crumbled away after a few months' experiment. Other bricks have split and broken.

*

The reasons for their failure are well known and I pity those building owners whose houses or factories have been constructed of bad bricks. The cemetery certainly is a warning to some of our brick manufacturers. Will they take the warning, or will the consumer in disgust turn more and more to reinforced concrete and other materials?

*

ADVERTISING DISPLAYS ITSELF

I went round the Advertising and Marketing Exhibition with a well-known advertising expert. He was very frank about his profession. " Up till a few years ago it was a racket," he observed, " as architecture was when people like Pecksniff could call themselves architects."

*

He said that the trouble with previous advertising exhibitions was that hot air and uplift were commodities that couldn't be displayed. He added: " This show's different because people are showing facts about markets."

*

Olympia is rich in beautifully designed charts and maps. I was specially impressed with some charts painted on Georgian wired glass (which was used as transparent graph paper), and as I was studying the statistics of the incomes and purchasing power of various classes, I was introduced to the designer of the charts.

*

He told me that they had nearly been sabotaged when the stand was being erected by a workman whose class-consciousness was inflamed by the facts on the charts, and whose comments on them were original. The sort of originality, unfortunately, that cannot be printed.

*

A few of the stands at Olympia bear the mark of managing directors who are overdue for retirement or confinement in some kind of a home. Even Mr. Emberton's skilful control of stand design has failed to mask the reckless stupidity of some old gentlemen without taste or judgment.

*

I heard that at the last advertising exhibition in 1927, one exhibitor wanted his stand to be a rustic scene, a garden with a summer house, and a pond with ducks swimming in it and an arbour or two.

*

It wasn't even a horticultural newspaper that wanted the ducks: it was a printer, who wanted to tell the world that he had a factory in a garden.

*

He didn't get what he wanted.

*

Mr. Emberton doesn't encourage selfish stands. He gives every exhibitor the chance of self-expression, but, like a good guardian of order, he won't have any of the drunk and disorderly design so dear to old-fashioned individualism.

*

CHISWICK: A WARNING

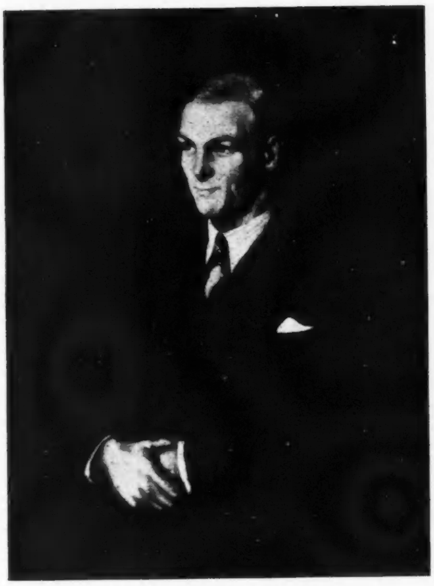
Much has been written about London's new bridges and the brave new road they serve. The road has brought destruction—in Chiswick, alas, to some perfect eighteenth-century houses—and soon it will bring " development."

*

A warning. The Chiswick Council has an enviable record for good works. The new mayor, Councillor F. S. Hayburn, is by all accounts a man of great culture and understanding. If this road brings development, let it be decent development. And let the development pay regard to the amenities of the Mall.

*

The malls of Chiswick and Hammersmith are unique. The loss to London will be irreparable if such character



W. W. WAKEFIELD.
From the painting by Cosmo Clark.

as has been left to them by water gipsies is snatched away by pedlars of land.

*

Their ancient flags have echoed to the footsteps of Louis Napoleon, William Morris, and Sir J. C. Squire. Today, I am told, the sensitive ear can detect Playfair footsteps and Kennington footsteps, footsteps of a Hermes, a Ravilious, a Cobden-Sanderson, a Herbert, an Austen, a Coxon, a Stabler, a Norman Wilkinson, an E. Maxwell Fry. The malls, said my informant, are to art what the playing fields of Eton were to Waterloo.

*

One name known to me from a picture in the Royal Academy is missing from the above list. It is the name of the painter of the portrait of Mr. W. W. Wakefield. Mr. Wakefield may be said to move in architectural circles, since he is one of the big men in Shapland and Petter, the famous furniture manufacturers.

*

He moves in other and faster circles. I refer not to his private life, about which I know nothing, but to his public one on the rugger field. Mr. Wakefield has skippered England more times than a normal man can count. It is said that were all his international caps laid side by side they would go round Twickenham.

*

The painter of the portrait, Mr. Cosmo Clark, is, I am told, one of the "coming men." I believe it. Such portraits of his as I have seen are quite outstanding. Their execution is brilliant, and they show an incisive yet kindly quality in the portraiture of character which is not common amongst contemporary painters. I prophesy that Mr. Clark will rank amongst the great English portrait painters.

*

TRAFFIC SIGNS

One Department of Government causes a committee to examine the important question of the place of design in everyday life. Another produces a set of road signs as debased and brutal in conception as are the lowest forms of advertisements, meriting all and more of Lord Crawford's cutting references in his letter on the subject to *The Times.*

*

The letter did not please Sir Henry P. Maybury, "Chairman of the Departmental Committee which recommended to the Minister of Transport the traffic signs to which Lord Crawford and Balcarres takes exception."

*

He proceeded to jump into the trap. He wrote :

> "While the committee fully recognized the importance of the adoption of signs which would not be too unpleasing to the eye, they had also to keep very prominently before them the fact that the primary object of warning signs is to promote safety on the roads. For this purpose very clear signs must be used . . ."

*

It obviously never occurred to Sir Henry that a clear sign might be a pleasing one. *Fitness for purpose* is a phrase with which, as he would say, he is not cognizant. Art, he considers, is one of those things you add to make a thing look tasty after the work has been done. If anyone told him that the clearest sign would be the most beautiful . . . that the whole trouble about his own signs is that they are *not* clear . . . that to get a really clear sign you must get a really good artist to do it—he would be scandalized.

*

Let us not be too hard on Sir Henry. He admits that "to my untutored eye there is nothing particularly objectionable about the symbol for a hospital." But why in that case bother to write ? Surely if Sir Henry's eye is untutored the best thing he can do, as chairman of a traffic signs committee, is to keep quiet about it.

ASTRAGAL

THE ARCHITECTS' DIARY

Friday, July 21

LIVERPOOL SCHOOL OF ARCHITECTURE. Opening of new school buildings by Lady Leverhulme. Exhibition of current work and of work by old students. Exhibition of the work of past and present Rome Scholars in Architecture.

LEICESTER. Meeting of Royal Archæological Association.

OLYMPIA. Advertising and Marketing Exhibition.

Saturday, July 22

Sunrise 5.8 a.m. Sunset 9.4 p.m.

OLYMPIA. Advertising and Marketing Exhibition. Closing day.

Monday, July 24

ARCHITECTURAL ASSOCIATION. Exhibition of Students' work till July 29.

Thursday, July 27

PAINTERS' HALL, Little Trinity Lane, E.C.4. Opening of the second conference of the Incorporated Institute of British Decorators.

NEWS

POINTS FROM THIS ISSUE

The relationship of the R.I.B.A. to the Allied Societies : Criticisms 76

All meetings of the R.I.B.A. Council are private and confidential and the representatives are not permitted to give true account of their stewardship to the bodies they purport to represent 77

A new Allied Society for the Metropolitan area? 77

We shall shortly find a market for standardized houses 78

Form of procedure for architectural panels 89

Supplying designs to speculative builders at rates which they are willing to pay 89

Commercial development of Claudegen daylight 92

25,000 VISIT EXHIBITION OF BRITISH INDUSTRIAL ART

The Exhibition of British Industrial Art at Dorland Hall, which closed on Wednesday, July 12, was visited by 25,000 people.

The last exhibition of the kind to be held in these premises in Regent Street was the Swedish Exhibition of 1931. Public attendances at the Exhibition now concluded have beaten all records by many thousands.

It is estimated that 7,000 people "played" in the children's nursery, and in one day 1,600 people examined the "Minimum Flat" designed by Mr. Wells Coates. A mansion to be erected immediately on a site in Hampstead will contain 29 such flats, all of which are already let to visitors to the Exhibition.

Many requests have been received to send the Exhibition on tour through England and abroad. Early in October a selection of exhibits will be re-assembled in the Art Gallery, Manchester. Later the same will be exhibited in Leeds.

SIR MERVYN MACARTNEY

The Dean and Chapter of St. Paul's have given permission for a simple tablet to be erected in the Cathedral to the memory of Sir Mervyn Macartney, who was Surveyor to the Fabric from 1906 to 1931. During his term of office, the great work of preserving the Cathedral was undertaken, and on the completion of it in 1930 he received the honour of knighthood. The tablet will be designed by Mr. Godfrey Allen, F.R.I.B.A., Sir Mervyn Macartney's successor at St. Paul's.

IS YOUR NAME on THE LIST?

The recent pronouncement of Mr. Runciman, President of the Board of Trade, to the effect that the United Kingdom Government consider "that nothing would be gained at present by developing its public works policy," and it had "terminated its own schemes and would not reopen them, no matter what might be done elsewhere," is an indication of the effort still to be made by the industry if the evils of a mistaken policy of retrenchment are to be averted. If the industry is sincere in its desire to educate the country to something superior to a negative policy of national parsimony, it must support the building Industries National Council in its endeavour to put forward a sane policy of national development as the united opinion of the industry.

While the Committee appeals most urgently for funds, which should be forwarded to the Hon. Treasurer, Mr. Oswald Healing, F.S.I., and made payable to "The Special Committee for Public Relations," it also appeals for the practical support of its policy in local centres by the bringing of pressure to bear on all occasions and at all times to indicate the folly of a policy of blind and negative economy in national industrial affairs.

In view of the retrogression in the fortunes of the industry that may well follow this unconstructive speech of the President of the Board of Trade, financial support for the necessary increased activity of the Committee becomes more than ever essential.

ARCHITECTURAL ASSOCIATION

The following awards were made at the Architectural Association's prize-giving on July 14. The prizes were distributed by the Rt. Hon. the Earl of Crawford and Balcarres. Mr. C. Lovett Gill, the President, was in the chair, and the vote of thanks was proposed by Sir Giles Gilbert Scott: Leverhulme Scholarship (value £1,000), David Duncan, Dundee. Public School Entrance Scholarship (value £75 12s.), H. A. Scarth (Charterhouse); honourable mention, S. Matthews (Charterhouse). Open Entrance Scholarships (value £75 12s.), John Wheeler (Bedales), R. V. Crowe (Westminster City School). A.A. Measured Drawings Prize (books, value £20), divided—K. C. Brown, W. Clarkson, P. H. Laurence. A.A. Essay Prize (books, value £10 10s.), D. E. Pilcher. "Alec Stanhope Forbes" Prize (for the best colour work during the session, books, value £5), R. E. Moira. Royal West of England Academy School of Architecture (affiliated with the Architectural Association) (prize in design, books, value £5 5s.), R. H. Sheppard. First-Year Course—"Howard Colls" Travelling Studentship (value £15 15s.), D. W. Pye; second prize (books, value £5 5s.), R. K. Rutherford; honourable mentions, J. S. Neish, D. S. Pearce, J. C. Ratcliff; Principal's Special Prize, J. F. Walter. Second-Year Course—A.A. Travelling Studentship (value £26 5s.), B. H. Peake; second prize (books, value £10 10s.), M. Patrick; honourable mentions, R. A. B. Hitch, P. H. Laurence, Miss G. H. McKenzie, R. R. Wilkins. Third-Year Course—Holloway Scholarship, tenable for two years (value £250), N. C. Westwood; A.A. Travelling Studentship (value £31 10s.), H. T. Cadbury Brown; second prize (books, value £10 10s.), E. Ward; honourable mentions, R. Gordon Brown, C. O. Tremeer, R. S. Tubbs. Fourth Year Course—Year Prize (books, value £10 10s.), H. Tayler; honourable mentions, Miss M. J. Blanco White, M. J. H. Bunney; R.I.B.A. "Henry Jarvis" Scholarship for Construction (value £50), Miss M. J. Blanco White; honourable mentions, R. P. Hamlin, H. Tayler. Fifth Year Course—A.A. Travelling Studentship (value £50), E. T. Dowling; "Henry Florence" Travelling Studentship (value £50), W. Fisk; third prize (books, value £10 10.). O. Pryce Lewis; honourable mentions, P. E. Cornu, F. N. James, A. W. F. Sterling, R. Wilson. Special Draughtsmanship prizes—1st year, K. Beale; 2nd year, G. Townsend; 3rd Year, E. Ward; 4th Year, Miss J. B. Drew; 5th Year, E. T. Dowling.

MOVING-FORM CONSTRUCTION

The half-tone illustrations appearing on the back page of the Supplement to our issue for July 13 were taken from an article specially contributed to *The Engineer* by Mr. H. H. Broughton, and Dr. Faber was not associated in any way with the works shown on this page. We tender our apologies to Mr. Broughton for not having mentioned his name.

THE ADELPHI

The discussion in the House of Commons on the Adelphi Estate Bill last Wednesday is reported in our "In Parliament" Column on page 90.

When the discussion of the Adelphi Estates Bill was resumed in Parliament on Monday, July 17, Sir K. Vaughan-Morgan withdrew his motion in favour of the following motion, moved by Sir Arthur Steel-Maitland:—"That it be an Instruction to the Committee on the Adelphi Estate Bill to take into consideration the effect of the Bill on the architectural and artistic aspect and other amenities of the river front, and to hear such evidence thereon as the Committee may think fit and, in the event of their approving the preamble of the Bill, to make provision requiring that drawings of the elevations of any new building to be erected on the Adelphi foreground shall be subject to approval by the Royal Fine Art Commission or the Crown Lands Advisory Committee, or such other body of persons as the Committee may consider suitable."

Sir Arthur said that the object of this instruction was to bring before the Committee which would consider the Bill three points of the greatest importance, on which there was a difference of opinion during the recent debate. These were: Was Adelphi Terrace a building of which the artistic and architectural value was such that in the public interest it ought to be preserved; what would be the effect on the amenity of Thames-side of the replacement of Adelphi Terrace by a block of flats or offices 120 ft. high and 50 ft. or 60 ft. nearer the river front than the existing terrace; and ought the view of Adelphi Terrace from the road which at present fronted it to be preserved for such passers-by as wished to see the view?

Sir Wm. Davison seconded the motion, which was agreed to.

At question time, in reply to inquiries as to the erection of government buildings on the Carlton site in Edinburgh, Mr. W. Ormsby-Gore, the First Commissioner of Works, said that the Royal Fine Art Commission for Scotland were being consulted on, and had still under consideration, various questions relating to the choice and method of development of the Carlton site. He was awaiting their report, which he hoped to receive at an early date. On the assumption that agreement was reached in regard to the use of the Carlton site, the Government had decided that the design of the building should be entrusted to an architect in private practice. The architect would be selected by a special committee, including the Secretary of State for Scotland and himself, on which, among others, the Royal Fine Art Commission for Scotland and the Royal Incorporation of Architects in Scotland would be invited to be represented. The architect's design would in due course be submitted to the Royal Fine Art Commission for Scotland and the Corporation of the city of Edinburgh. In order to avoid any misunderstanding, he would add that the Government had not taken, and would not take, any decision as to whether they would or would not proceed with the actual construction of the building until all these preliminaries were completed, and they were in a position to consider final plans and estimates of cost.

It is understood, writes our Parliamentary correspondent, that the Government have decided to deal in this way with the proposed new Government buildings in Whitehall. The design of the new buildings will be entrusted to an architect in private practice, and no decision will be taken as to whether the Whitehall scheme will be proceeded with until the design has been approved by the Royal Fine Art Commission and until it has been possible to form a definite estimate of the cost of the work.

THIS ARSHETECTURE

Fine old timbered tithe-barn for sale for demolition. Guildford District. Many tons old oak. Thousands old tiles. Wonderful opportunity for erection "period" architecture—From the personal column of *The Daily Telegraph*.

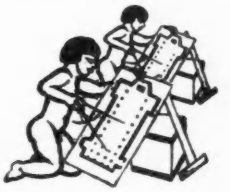
R. I. B. A.

NOTES FROM THE MINUTES OF THE COUNCIL

The Public Relations Committee

The following members were appointed to serve on the Public Relations Committee: The President, Mr. John Dower (A.), Mr. R. A. Duncan (A), Mr. E. Maxwell Fry (A.), Mr. C. H. James (F.), Mr. A. B. Knapp-Fisher (F.), Mr. T. Alwyn Lloyd (F.) (Cardiff), Mr. Basil Oliver (F.), Hon. Humphrey Pakington (F.), Mr. S. C. Ramsey (F.), Major F. W. Rees (L.) (Croydon), Mr. A. L. Roberts (F.) (Winchester), Mr. Howard Robertson (F.), Mr. J. Alan Slater (F.).

COMPETITION NEWS



Competitions Open

September 1.—Sending-in Day. Proposed Hospital at Surbiton. Assessor: C. E. Elcock, F.R.I.B.A. Premiums: £120, £75, £50 and £25. The conditions, obtainable from A. C. C. Dunn, Hon. Secretary, Surbiton Hospital, St. James's Road, Surbiton, were reviewed in *A.J.* for May 24.

September 11.—Sending-in Day. The Directors of Gidea Park, Ltd., invite designs for five different types of house (ranging from £400 to £900). Assessors: Prof. S. D. Adshead, F.R.I.B.A., A. E. Beresford, F.R.I.B.A., Ald. Ewart G. Culpin, F.R.I.B.A., E. Maxwell Fry, A.R.I.B.A., Howard Robertson, F.R.I.B.A., and W. Harding Thompson, F.R.I.B.A. In addition to being paid a fee according to the scale of charges of the R.I.B.A., the authors of the first five selected designs in each class will be paid a premium of £10. Particulars obtainable from Gidea Park, Ltd., The Estate Office, Hare Street, Gidea Park, Romford, Essex. Deposit 5s.

September 21.—Sending-in Day. Proposed Town Hall for the Borough of Hornsey. Assessor: C. Cowles-Voysey, F.R.I.B.A. Premiums: £350, £250 and £150. Full conditions, etc., were published in our issue for May 17.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Development of the coastguard site, Bexhill. Assessor: T. S. Tait, F.R.I.B.A.. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere A.R.I.B.A. Conditions are now being drawn up by the assessor.

Decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.: G. Alan Fortescue, F.R.I.B.A. Premiums 50 guineas, 15 guineas and 10 guineas.

Conditions governing the competition, which closes on December 15, 1933, will be issued on September 30 next.

THE HORNSEY COMPETITION

[This is the second article by Iodos on the Hornsey Competition. His review of the conditions appeared in our issue for May 17.—ED. *A.J.*]

Borough of Hornsey: Competition for New Municipal Buildings. Assessor: C. Cowles-Voysey, F.R.I.B.A. Premiums: £350, £250 and £150. Sending-in day: September 21, 1933. Conditions from Town Clerk, Town Hall, Highgate, N.6. Deposit one guinea.

2. Answers to Questions and Second Thoughts.

By Iodos

THE answers to the questions sent in by intending competitors for the Hornsey Competition have now been received. They do little to ease the very difficult planning problems which the awkward site presents. The promoters and assessor, no doubt wisely, seem determined to make no more fixed conditions than they can help.

Certain items of additional information are, however, valuable, and in one or two respects other points of possible uncertainty are satisfactorily cleared up.

THE SITE

The conditions stated that "the Corporation have no rights of light over adjoining property," leaving the possible inference that at least one adjoining building might have some right of light over the site which would involve setting back the new building. The answer to a question on this point makes it clear that "no adverse rights" of light affect the site; competitors will need only to provide adequate light for their schemes *within* the given boundaries.

Among the provisions most stringently limiting the layout was that requiring the buildings to be "set back" from the Broadway frontage "so as to form a forecourt that can be used for parking cars, and so as to leave a through way for vehicles" into Hatherley Gardens. Since such setting back seemed likely to involve the exposure of very unsightly flank walls of adjoining buildings on Broadway, and to make any effective Broadway elevation extremely difficult to contrive, several questions were asked by competitors obviously anxious to limit the setting back and the size of the forecourt to a minimum. One obvious expedient would be to project wings up to or nearly up to the Broadway frontage, masking the adjoining flank walls, with the forecourt between them: the answer to a question which seems to suggest this treatment is "Yes." On the other hand further answers make it clear that (i) the Hatherley Gardens roadway may not itself be used as a car-park, (ii) the requirement that the car-park should be "as large as can be planned on the site" is "very important," and (iii) the forecourt is intended to be the only or at least the principal car-park, though it is not positively stated that there may not be additional parking-space elsewhere.

Reading conditions and answers together, it seems to be strongly suggested that the buildings should be entirely confined to the back portion of the site behind the line (A—A on Fig. 1) of Hatherley Gardens. A large-enough building, in the four stories (basement, ground, first and second) which the conditions seem to require, can be fitted into this space—about two-thirds of the whole site—but it is a tight fit, as a comparison of Figs. 1 and 2 (to the same scale) indicates. Competitors may prefer the intricacies of an attempt to bring parts of the buildings further forward to make some sort of a Broadway façade.

In either case the crux of the design problem will be the provision of direct and dignified public access to the Assembly Hall. It seems almost inevitable that the hall should be at the back of the Municipal Offices, which in any event must be comparatively narrow and deep on plan; a roadway round to the back is hard to make dignified and must make the offices still narrower, while a way through the centre of the offices from a common entrance, though it offers a good chance of architectural treatment, will tend to be inconveniently long.

The difficulties of the narrow site may be slightly relieved by the ruling that there is no need for a through way from the front to the service road adjoining the clinic at the rear. Further rulings affecting the use of the site are that no part is required to be retained as a children's playground, and that the preservation of trees, though desirable, must not interfere with the planning.

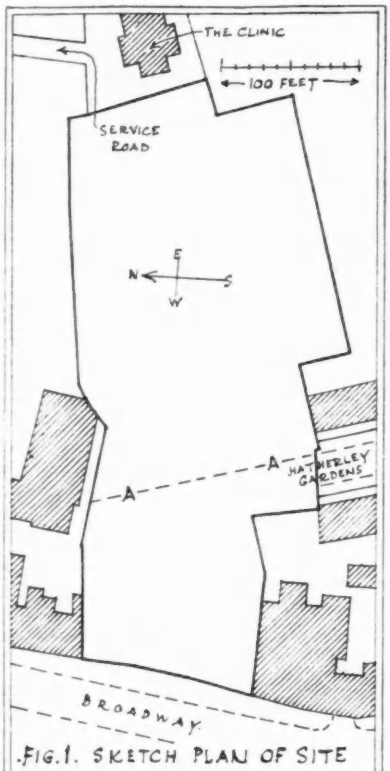


FIG. 1. SKETCH PLAN OF SITE

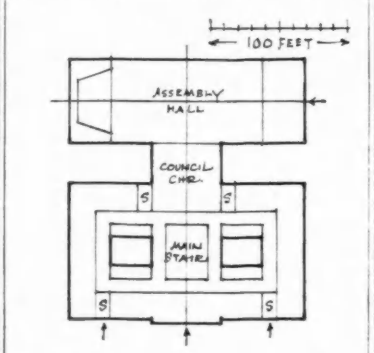


FIG 2. THE HORNSEY REQUIREMENTS, TO THE SAME SCALE, ARRANGED AS AT WORTHING.

THE BUILDINGS

The answers give a number of further directions as to the planning of the required accommodation. Most are points of small detail. One small but important mistake in the conditions is corrected: the distinctly awkward requirement that the medical officer's waiting room should be near the general enquiry office (at the principal entrance) proves to be an error; it should read "near the general *clerk's* office of the M.O.'s Department." The answers to two questions about the interview room of the treasurer's department seem to conflict with each other, but one may assume that only one interview room is required. Valuable guidance as to the lavatories required is provided by the information that the present staff numbers 92 men and 11 women. The kitchens for the Assembly Hall and the staff mess are to be separate, though the latter might perhaps have lift-connection with the further kitchen-service of the committee suite. A buffet (bar?) is required for the hall, but no large refreshment room, the banquets being served in the hall itself.

Generally speaking it may be said that the accommodation requirements are clear and straightforward. The main issue before competitors will be the allocation of the various departments to the several floors. Additional directions on this point are given by several answers. The M.O.'s department and the education department may be on the second floor, but it is desirable that the juvenile employment offices (included under the education department in the conditions) should be on the ground floor. The caretaker's quarters should be in the main building; their allocation to the second floor would seem advisable. It is required that the Assembly Hall with all its ancillary accommodation should be self-contained, but permissible that it should be interlocked with the offices into a single building; and it is "desirable but not essential" that the connection between the council suite and the hall, besides being "direct and dignified," should be "internal."

Fig. 2 shows a rough sketch of a block, on the model of Mr. Cowles-Voysey's Worthing scheme, which would give approximately the space asked for at Hornsey, if arrangement on four floors were adopted for the offices, with the hall separate. The sketch presumes some such allocation as the following (sizes are approximate, and exclusive of passages):—

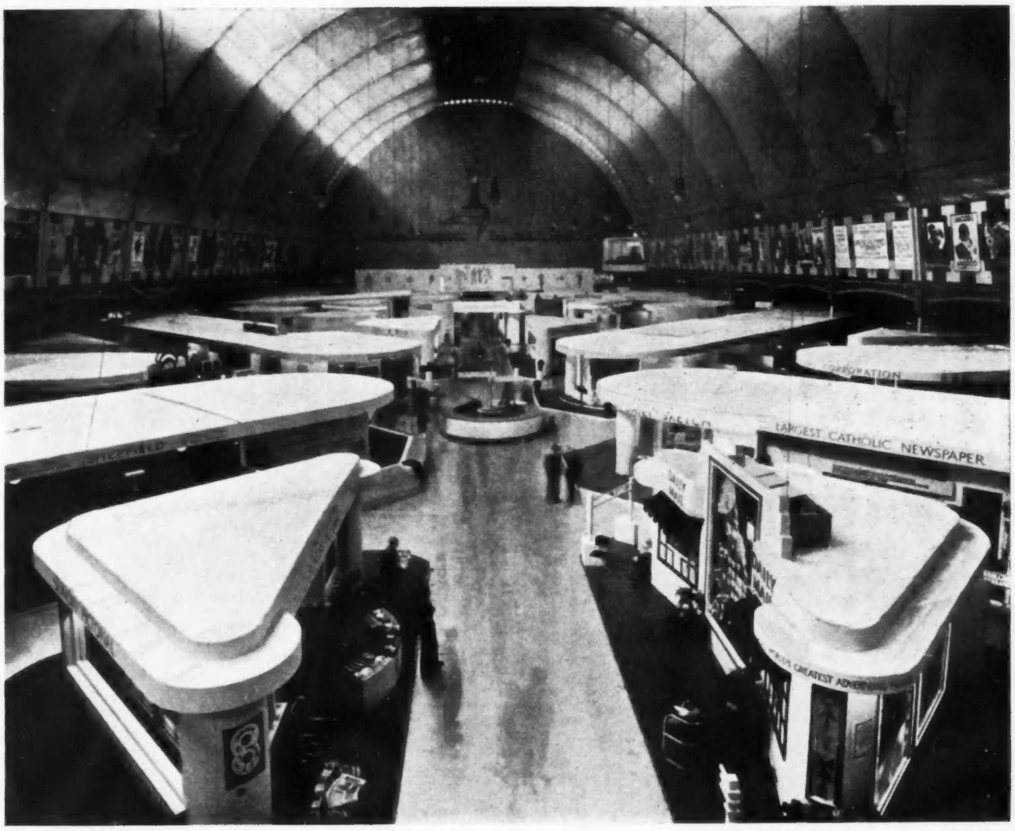
Basement—10,000 sq. ft.	
Garage and cycles ..	2,000
Heating, plant, etc. ..	2,000
Specified storage, etc. ..	2,000
Spare storage, etc. ..	4,000
Ground Floor—10,000 sq. ft.	
Treasurer's department ..	4,200
Engineer's department (part)	3,200
Juvenile employment ..	600
Miscellaneous and lavatories	800
Entrances, etc.	1,200
First Floor—10,000 sq. ft.	
Council chamber and ante	2,400
Council suite	4,000
Town clerk's department	1,600
Engineer's department (part)	1,000
Miscellaneous and lavatories	1,000
Second Floor—10,000 sq. ft.	
Council chamber (upper part)	1,750
M.O.'s department ..	1,550
Education department ..	1,750
Caretaker's quarters ..	750
Staff mess and lavatories..	700
(Future extension ..	3,500)

It need hardly be said that neither this arrangement nor any other at all similar layout of standard type is at all applicable to the site. The sketch is given merely to demonstrate this fact, and to give some indication of the amount of space the buildings may be expected to take up.

GENERAL CONDITIONS

The interesting but somewhat vague provision that the borough engineer will "act as consultant" is now satisfactorily defined as meaning that he will perform the functions of a consulting engineer in regard to the steelwork and general construction, without any charge on the architect's fees. Less satisfactory is the completely free hand given to competitors as regards the colouring, rendering, etc., of their drawings—when colouring to show the different departments is permitted, it is far better for both assessor and competitors that the colours to be used should be specified; and when "competitors are urged to make their drawings as simple as possible," it is surely wiser to rule out the colouring of materials and the casting of shadows.

THE ADVERTISING EXHIBITION



DESIGNED BY JOSEPH EMBERTON

The above photograph, a view of the main hall at the Advertising and Marketing Exhibition at Olympia, shows the quality of the design of the lay-out. There is a wide aisle down the middle of the hall, and from the central feature an information bureau other aisles run diagonally.

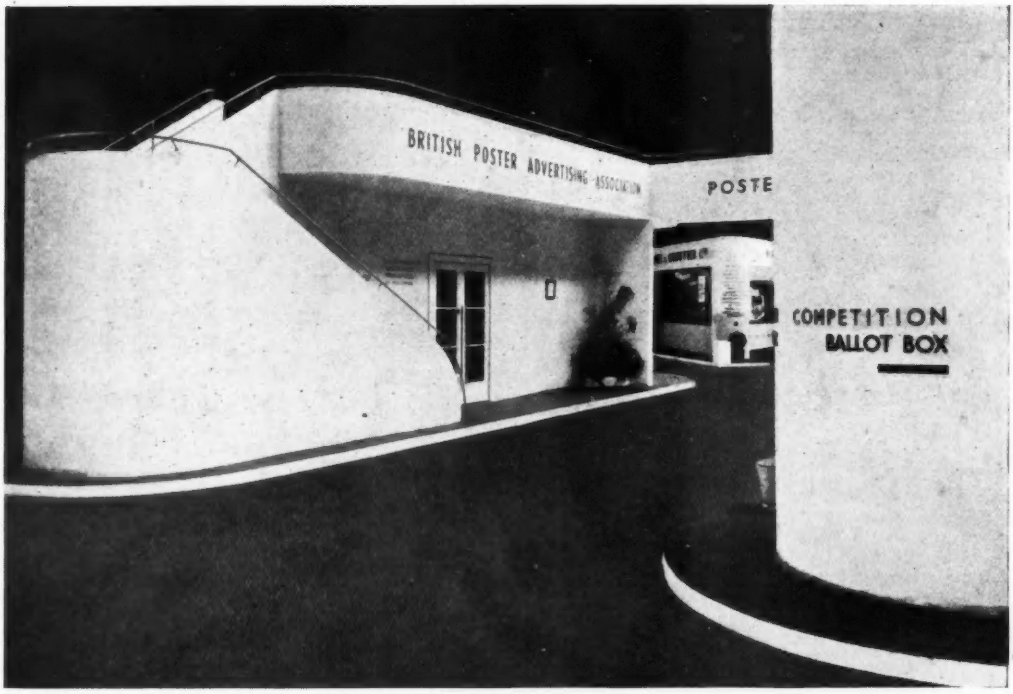
This has the effect of opening out the Exhibition, and is a great improvement on the gridiron type of plan which is adopted for the lay-out of the Ideal Home Exhibition. Here there is none of the higgledy-piggledy disposition of stands which makes one feel, in some exhibitions, like Alice in the Looking Glass garden—however hard one tries to get to another part of it, one invariably finds oneself back again at the starting point.

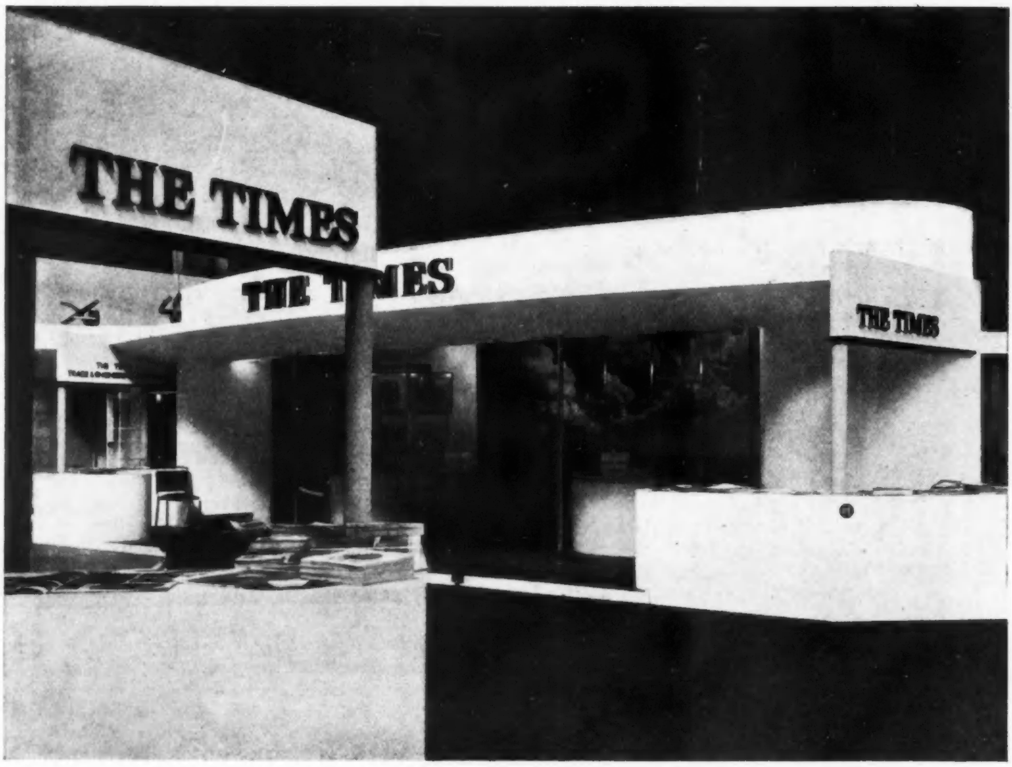
The floor of the hall has been sprayed with silver, and the stands are all of the same height and are painted a uniform cream colour. The type of lettering, too, has been standardized.

Round the walls of the hall are hung the 100 Best Posters, which can be viewed and judged profitably by visitors from a raised platform which has been built in the centre.

The Exhibition was opened on Monday by Lord Derby, and will remain open until July 24. It represents in many ways a triumph for the modern idea, both architecturally and in advertising method. As our leader writer says, "if commerce is developing this lucid scrutinizing character, then commerce will become a more enlightened patron of architecture in the future."

THE ADVERTISING EXHIBITION:

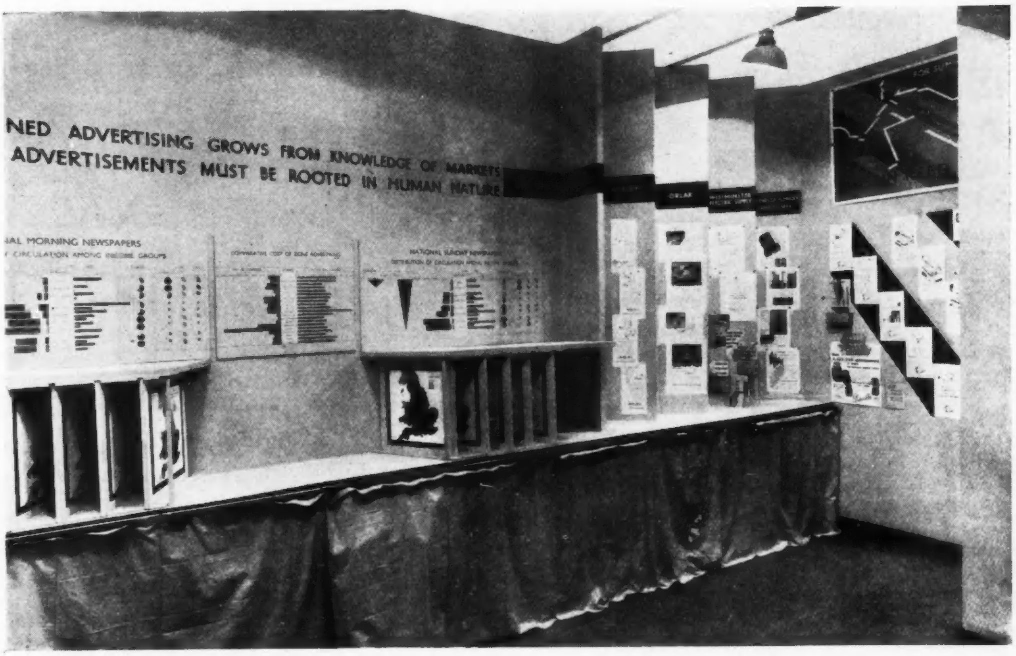

BRITISH POSTER ADVERTISING ASSOCIATION
POSTE
COMPETITION
BALLOT BOX

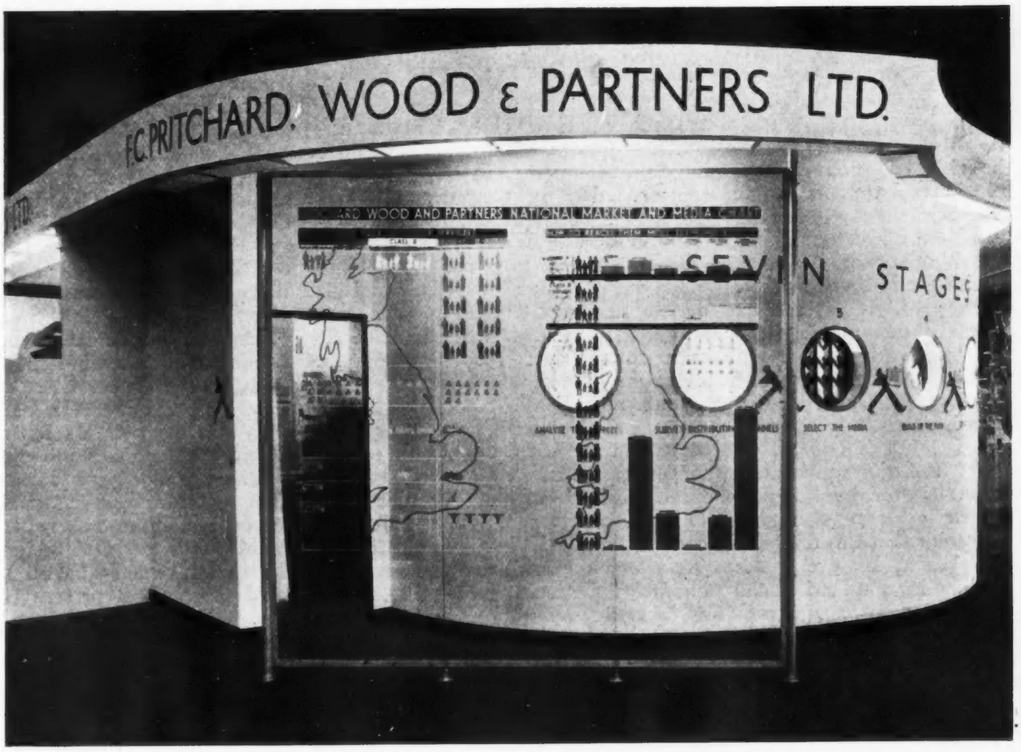

THE TIMES
THE TIMES
THE TIMES

(Above) A view in the main aisle. The simple and straightforward architecture of the exhibition has in some cases been marred by the introduction of senseless ornaments like the flowers in the corner. Flowers are all right, but they must be the right kind. Out of the picture is another vast bouquet standing on a gilt table.

(Below) "The Times" Stand, which is one of the best. The big photograph which forms the backcloth to the stand is held in position by chromium plated uprights, and is so successful that it suggests a new use for photography—as a possible medium for modern "interior decoration."

DESIGNED BY JOSEPH EMBERTON


NED ADVERTISING GROWS FROM KNOWLEDGE OF MARKETS
ADVERTISEMENTS MUST BE ROOTED IN HUMAN NATURE
NAL MORNING NEWSPAPERS


F.C. PRITCHARD, WOOD & PARTNERS LTD.
ARD WOOD AND PARTNERS NATIONAL MARKET AND MEDIA CHART
SEVEN STAGES
SELECT THE MEDIA

(Above and below) The interior and exterior of Pritchard, Wood and Partners' stand. For those who want to see information well displayed and co-ordinated here is a model. It suggests that producing advertisements for newspapers is not merely a matter of writing slogans and drawing pictures. It is highly skilled and highly organized business involving careful planning, with people as markets, shops as distributive channels, newspapers as means of transport for delivering news about the goods, and the results as net profits. Astragal refers in this issue to Georgian wired glass used as graph paper. This can be seen in the lower photograph.

A cottage designed by Forbes and Tate. It illustrates the possibilities of timber houses referred to in Mr. W. H. Colt's letter.

LETTERS
FROM
READERS

ICONOCLAST
J. D. HOSSACK, F.R.I.B.A.
N. MARTIN-KAYE, F.R.I.B.A.
FRANK H. HEAVEN, A.R.I.B.A.
W. H. COLT
A. S. FRITH,
General Secretary, Workers' Educational Association
G. F. CURTIS,
Managing Director, Hawes and Curtis

Architecture as a Trade

SIR,—At the risk of prolonging a correspondence beyond that datum at which an editor is inclined to close the door, I cannot let the last letter from Orthodox pass without comment, if you, Sir, can bear with me so much farther.

I would be glad if Orthodox would note that I did not say the R.I.B.A. was "primarily a London club," but that there was "some excuse for it being so," which he will no doubt admit is an entirely different statement.

With regard to the provincial minority in Council the bare figures which Orthodox gives may appear to bear out his point that this minority is substantial. When, however, it is remembered that in England alone there are half as many again provincial members as Londoners, which would justify a direct representation of three-fifths of the R.I.B.A. Council, I do not think my sense of proportion is at fault in describing the bloc of twenty-four as a small minority. Whether or not this statement can be conjured into a sense of inaccuracy, the point at which I am driving is surely obvious, viz., that the direct representation of the Allied Societies bears no real relation to their size. Let me quote a case. The South-Eastern Society of Architects has six hundred members, and has one direct representative on Council. On this proportion the representatives of London would be about three!

Orthodox invites me to state when an Allied Society has had to decide at short notice upon a far-reaching scheme. I can refer him at once to the last reopening of the Licentiate class which was on the agenda of one Allied Society Council meeting as a matter of extreme urgency and was there voted upon. I am convinced that this measure needed much more consideration than it received.

I can also refer him to a pamphlet enclosed in the last issue of the R.I.B.A. *Journal* laying down a revised scale of charges for speculative houses. *This has never been before an Allied Society* and is yet a far-reaching measure touching all districts of the country.

It is true the Allied Societies appointed representatives to consider the scale, but never was it intended for fundamental matters to be decided without further reference to the membership.

I am sorry to have to bring these matters out into the light of day, but Orthodox rather forces my hand. But lest this bear the complexion of a wrangle between a "pro-R.I.B.A." and an "anti-R.I.B.A.," let me assure you and your correspondents that I have the deepest respect and affection for the parent body; and that it is just this which encourages me to make suggestions for its better reorganization.

ICONOCLAST

SIR,—Iconoclast's articles on "Architecture as a Trade," and the subsequent correspondence, arouse interesting points upon the relationship of the R.I.B.A. to the Allied Societies.

Mr. N. Martin-Kaye refers to the poor return of voting papers at each annual election. Can this be wondered at when individual members, spread throughout the British Isles, are asked to run their red pencils through lines of names, which, in the bulk, are unknown to them?

How can this be called a representative system of voting, and how can individual members be blamed for tearing up the papers in disgust rather than run the risk of relegating to obscurity by a false vote some possibly thoroughly deserving nominee at the expense of someone less worthy?

I express ignorance as to how the names originally find themselves upon the voting papers—for all I know the method, under present rulings, is scrupulously just—but it does not seem satisfactory.

Is it not feasible to permit a better representation for the Allied Societies upon Headquarters, and closer co-operation than already exists, particularly regarding nominations?

The writer has nothing but admiration for the way in which the permanent officials at Headquarters cope with their present difficult task, but the R.I.B.A., having authorized and fostered the Allied Societies, must be prepared to widen its outlook beyond London.

Registration is, to all intents, an accomplished fact, and although membership of the R.I.B.A. is still held high in esteem, it may not be so when "Professor Jones" puts up his brass plate with the words "Registered Architect" upon it.

If, as Iconoclast suggests, the "London club spirit" is still fostered at the expense of a much wider representation through the Allied Societies, the danger referred to would appear to be increased.

The writer's impression of the present attitude of the R.I.B.A. to the Allied Societies is that of a wealthy and powerful relation towards his poorer brethren. The latter are not really seriously considered.

Hence Iconoclast's comment, that before schemes arrive at Allied Societies for consultation they have usually become too "cut and dried."

The writer does not wish to be a purely destructive critic, but would like to see the Institute make more use of its Provincial Societies, and also seriously reconsider the present system of voting.

J. D. HOSSACK

SIR,—Orthodox has turned his weapons upon me, and although I hesitate from intruding upon your space, I would like to draw his attention to the fact that I have already dealt at length with this very question in the columns of a contemporary for the June issue (*Architectural Design and Construction*). If he reads it he would be able to deal with me more fairly.

I do not dispute for a moment Orthodox's statement about the 24 local representatives he refers to, since they are certainly not elected by the votes of the majority of the members of the societies they represent. I would go still further and assess this representation, if such it be, as pure bunkum and nonsense. The fact that they figure at all on the Council list is purely an arrangement between the Allied Societies and the R.I.B.A. It is an act of grace on the part of the latter and necessarily limited, since the R.I.B.A. quite wrongly has to foot the financial bill of attendance of the representative in question. I have no desire to enlarge upon Orthodox's exposure of the futility of the position of these gentlemen, of which no doubt they themselves are more than conscious, in fact uncomfortably so. No blame attaches to them; they are there through the system, and the Allied Societies duly sensible of what services they are able to render under the circumstances.

I wish I did live in a private Utopia of my own, for then I should not be compelled to agree with Orthodox's assessment of the real value and efficiency of their representatives. Unfortunately it is worthless, for all meetings of the Council are private and confidential and the "representatives" are not even permitted to give a true account of their stewardship to the bodies they purport to represent. Otherwise the majority of members of allied societies would not be victims of ugly inconsistent rumours concerning a recent professional rumpus in the West of England, or for that matter other vital important business concerning the profession.

I repeat again, "every individual provincial member would vote for a direct representative" (representation in the full intent and meaning of the term) and am prepared to stand by this statement and defend its great probability under the following conditions :—

(*a*) That the metropolitan predominance on the Council, and even Standing Committees, be dispensed with.

(*b*) A new allied society be formed for the metropolitan area.

(*c*) Representation on a proper Federated R.I.B.A. Council be thrown open to the whole profession in the country in the following manner :—There are 49 allied societies, 30 of which are located in Great Britain and Ireland; 24 are entitled to a seat each on the Council. Create an allied society for the metropolitan area; the actual numbers would be 31 and 25 respectively. Of this total, 33 would be the number of seats to be filled and voted for by the whole electorate of 25 allied societies.

It works out at one member for every one society and one further member for every four, plus two for the metropolitan. This in contrast to the present unwieldy number of nearly 100, plus an unwieldy and unnecessary allied societies conference of another 100. The voting, an obligation of membership, would be conducted *by* each allied society and group of four allied societies under the direction of Conduit Street; and *for* one of their members whom everybody locally *would be likely to know personally*, the successful candidate being returned to Conduit Street. The expenses of the representation would be apportioned between Conduit Street and the electors in question. Interest would be stimulated still further by the voting for the additional representative for the group, and still more so if two or more candidates contested the local seats. The election to be triennial to preserve continuity of policy.

I agree that not necessarily every individual provincial member is attached to his local allied society, but if his vote was invited in the manner before described it is more than likely that there would be a greater accession to the membership lists—a still keener interest in local society matters—a cessation of see-saw reference between allied society and R.I.B.A. of which Orthodox complains, and what is more desirable still a vital interest enlivened in national professional matters. The machinery is all ready and the opportunity ripe for the centenary year, and what an opportunity!

N. MARTIN-KAYE

Associateship of the R.I.B.A.

SIR,—Within recent weeks there have been expressed in your columns differences of opinion regarding the present value of the Associateship.

The following suggestions are put forward as possible means whereby it could be improved.

(*a*) A rigid insistence upon all candidates passing the Institute's own examinations. No exemptions of any kind to be allowed.

(*b*) A revision of the regulation, requiring a six months' period of training in an office, whereby each candidate must, either prior to, during, or after passing the Institute's examinations, have served as a paid assistant under a qualified architect in practice for at least two years.

The Institute of Civil Engineers and the Colleges of Physicians and Surgeons have analogous regulations.

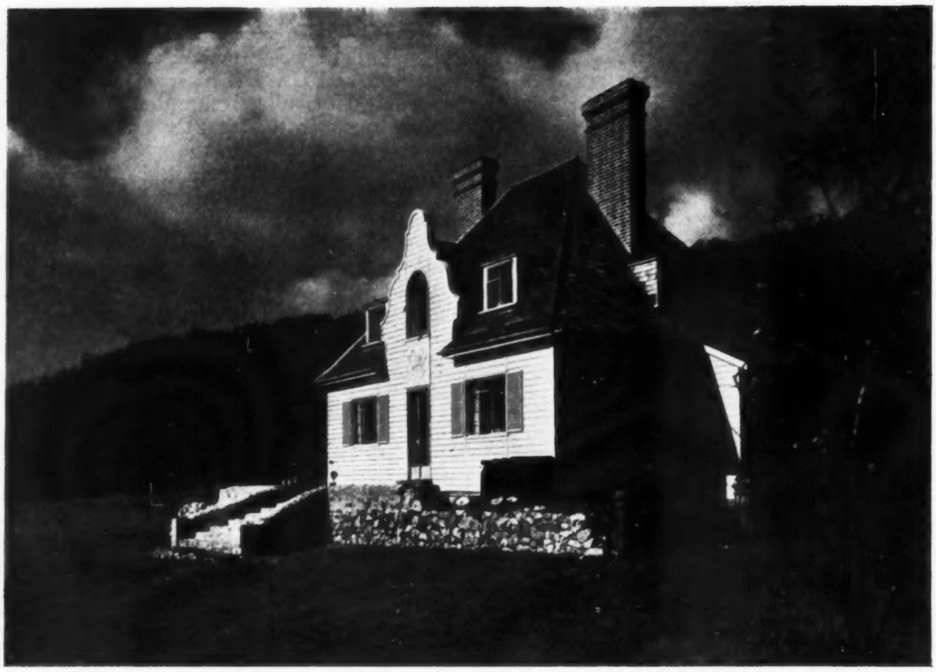
Such changes would (*a*) ensure that Associates had had practical as well as theoretical training. (*b*) guarantee a certain amount of efficiency to employers, and (*c*) recover some of the lost prestige.

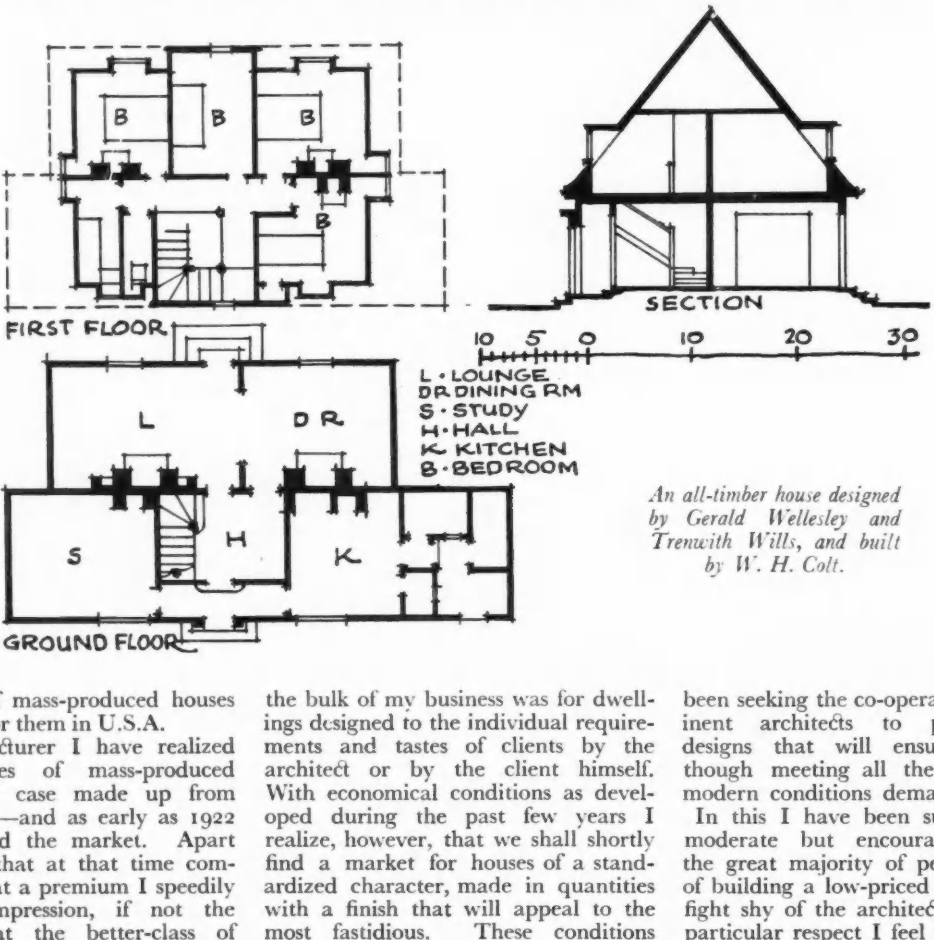
The Institute might, if times were normal, cavil at the loss of entrance fees and subscriptions which would result during the initial two-year period, but, if the change were made now, this would largely be neutralized by the fact that many who qualify within the next year or so will not find posts and must seriously consider deferring application for membership until more prosperous times. Later on, matters would right themselves, to the advantage of all concerned.

FRANK H. HEAVEN

What is to be done about this Standardized Houses

SIR,—As an old reader of your journal I observe with great interest





An all-timber house designed by Gerald Wellesley and Trenwith Wills, and built by W. H. Colt.

the mention of mass-produced houses and publicity for them in U.S.A.

As a manufacturer I have realized the possibilities of mass-produced houses—in my case made up from Empire timber—and as early as 1922 began to sound the market. Apart from the fact that at that time commodities were at a premium I speedily gained the impression, if not the conviction, that the better-class of English house-purchasers abhorred the idea of anything that smacked of mass-production or standardized houses, and the bulk of my business was for dwellings designed to the individual requirements and tastes of clients by the architect or by the client himself. With economical conditions as developed during the past few years I realize, however, that we shall shortly find a market for houses of a standardized character, made in quantities with a finish that will appeal to the most fastidious. These conditions a soundly designed and constructed timber house is amply qualified to meet, and I have for some years been seeking the co-operation of prominent architects to put forward designs that will ensure low cost though meeting all the requirements modern conditions demand.

In this I have been successful to a moderate but encouraging extent; the great majority of people desirous of building a low-priced house usually fight shy of the architect, and in this particular respect I feel that I can do a great deal to assist the profession by encouraging clients to avail themselves of independent expert service. In my way I make as much publicity for the architect as for my houses, a circumstance not generally understood by the profession.

To revert to standardized, mass-produced houses, I have been making a range of such for years, and numbers of these have been used not only by private individuals but also by estates, such as the Duchy of Cornwall. That these have given eminent satisfaction derives from the fact that I have only just recently received repeat orders from the Duchy for identical types made up from cedar weatherboarding, Douglas fir framing and red cedar shingles for the roofs.

W. H. COLT

Education

SIR,—The encouragement given by the Government to the slum clearance and rehousing campaign confirms the impression created by the recent Ministry of Health Circular 1331—namely, that the Government endorses the view that a reversal of the severe policy of retrenchment in respect of public works, initiated in 1931, is now warranted and necessary.

Is it too much to hope that the example set by the Ministry of Health may soon be followed by the Board of Education? As is well known, retrenchment measures ordered in 1931 brought to a summary conclusion school building schemes which were essential to the reorganization schemes recommended by the Hadow Committee and launched by the Government in 1929.

The programme so summarily halted in 1931 was not, as Lord Eustace Percy stated in the House of Commons in 1929, an extravagant one. It was, to quote Lord Eustace, " really a work of consolidation, economical in the truest sense." It had behind it, he added, " the convinced support of the industry and commerce of this country."

Abrupt suspension of the scheme sterilized much work which had been done and left many partly completed programmes in the air. So much so that, in many areas, two radically different systems of school organization are left standing side by side. No less serious, in effects, was the slowing down, as a consequence of the retrenchment policy, of alterations and repairs to overcrowded and insanitary schools.

Advocates of the retrenchment measures in 1931 urged that they merely involved " marking time " until the country's financial position was improved and confidence was restored. Is it not time now to go forward, especially with work which, as Lord Eustace Percy said, is " economical in the truest sense " ?

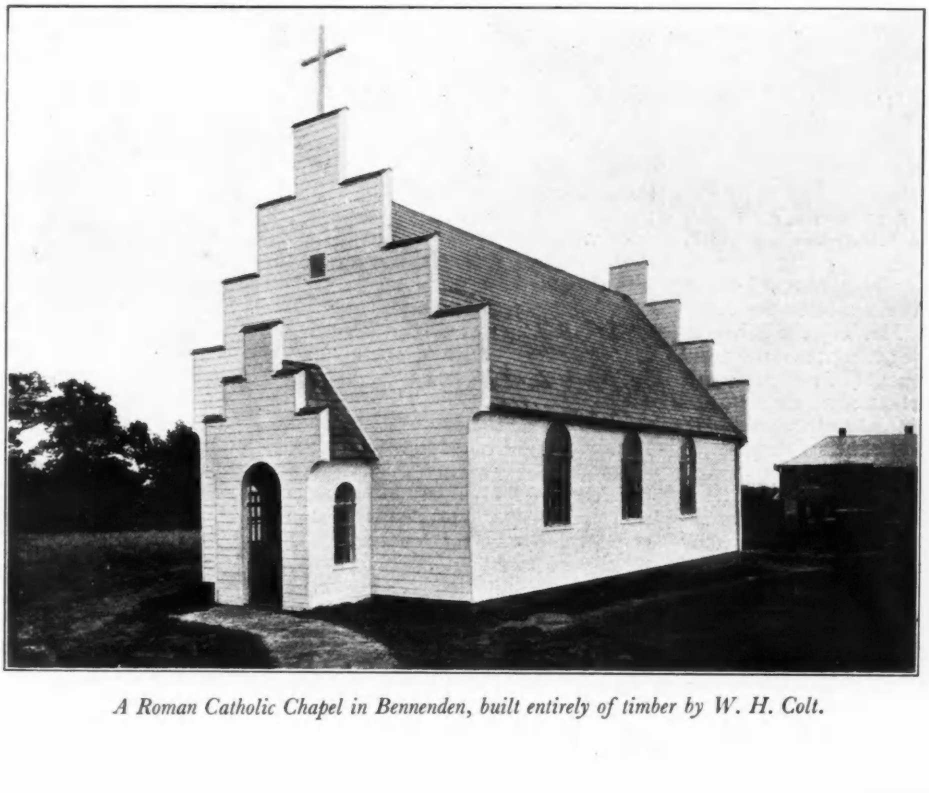
A. S. FRITH
General Secretary
Workers' Educational Association

The Milan Exhibition

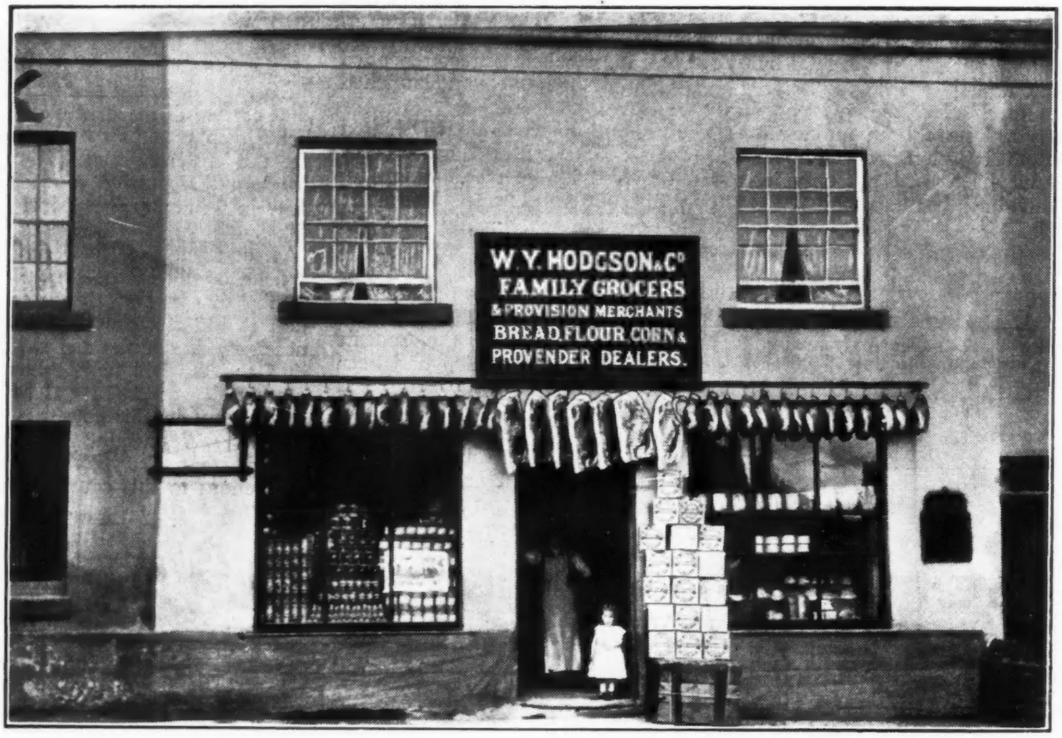
SIR,—We observe in your issue of June 15 a statement of a correspondent that certain of the exhibits of silk now being displayed in the British Section at the International Exhibition of Modern Decorative and Industrial Arts in Milan are made of Milanese silk.

As one of the two exhibitors of articles of silk in the British Section, we feel that it is our duty to call attention to the fact that all the processes necessary to convert the raw material into the finished article have in the case of all our exhibits at Milan been carried out in this country by British labour. We assume that it is well known that the silk worm is not indigenous to this country.

HAWES AND CURTIS, LTD.
G. F. CURTIS
Managing Director



A Roman Catholic Chapel in Bennenden, built entirely of timber by W. H. Colt.



A GROCER'S SHOP

A simple example of the shop whose virtue lies in the fact that it has, as Mr. Trystan Edwards says, "incorporated the pavement within its own premises."

He could, however, have given it a more exact place in the evolution of the shop by pointing out that it is not so much a type of its own as a transitional stage between the market-stall, where the buyer remains always on the pavement, and the modern store in which the internal alleys become streets in themselves.

LITERATURE

SHOPS

The Architecture of Shops. By A. Trystan Edwards, F.R.I.B.A. Chapman and Hall. Price 21s.

IN this book, whose comprehensive title in no way exaggerates the scope of its treatment, Mr. Trystan Edwards has made a brave attempt to summarize in a mere sixty pages of text and with the help of a collection of eighty or so plates all the principles of shop design; the relationship of the shop with city buildings and city streets as well as such particular problems as lettering and illumination, and has even included a chapter—if rather a sketchy one—on "Internal equipment and the display of merchandise."

This is so ambitious a task that the occasional imperfect syllogisms that have crept into his arguments and his rather more frequent vague generalizations based on somewhat doubtful premises may well be forgiven as the inevitable result of attempting to refer, if only in passing, to every problem with which the shop architect has to deal; though such completely meaningless remarks as (on page 27, concerning shopping-streets generally) "Nowadays however, the façades are apt to be too tall and there are too many windows," can hardly be passed over.

Throughout the book Mr. Trystan Edwards rightly emphasizes the importance of regarding the street and not the individual building as the unit of design and condemns the competitive spirit that encourages each new shop to shout louder than its neighbour; but here he is, I think, exceedingly optimistic in putting it within the power of the architect to ensure a co-ordinated design throughout a whole street of shops. I do not think we can expect such altruism from the average shop-keeper as the total sacrifice of the advertisement value of an arresting façade. It is only commercial expediency that will bring voluntary recognition of æsthetic amenities; a fact which is already becoming apparent in the decline of interest in the revival of good lettering now that the novelty (and therefore the advertisement value) of the movement has worn off.

It will take a great deal more than professional persuasion to bring the tradesman into line in this matter of orderly street-design, and some form of official control of elevations together with a readjustment of our antiquated system of leasehold seems the only solution.

It is this virtue of neighbourliness that Mr. Trystan Edwards extols in support of his plea for the revival of the shop of the Regency type, though he gives no reason why a rational modern type should not possess similar qualities and be at the same time more suited to modern methods

Four illustrations from *The Architecture of Shops*, by **A.** Trystan Edwards.

[The captions below the drawings are those in the book.]

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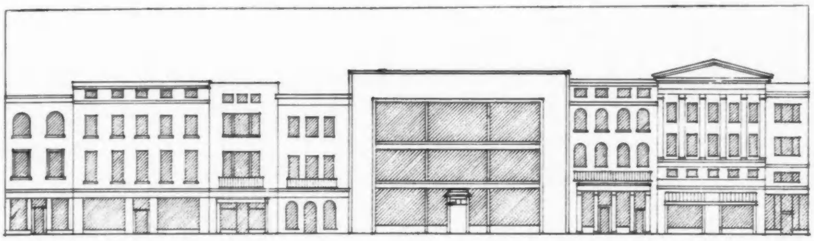
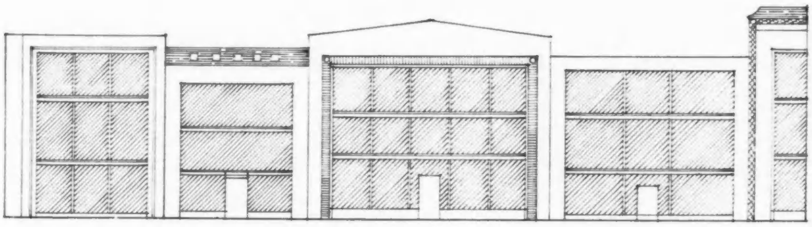
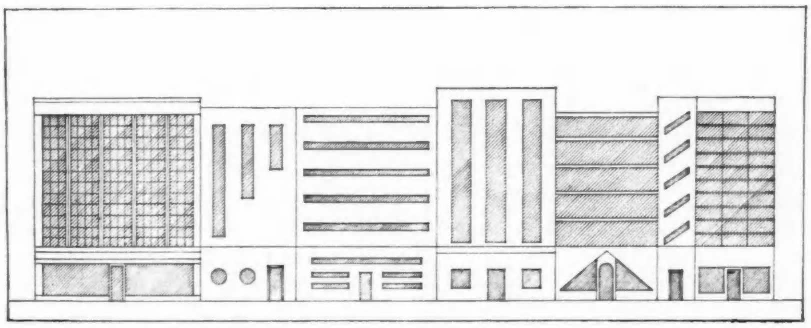


INCURSION OF MODERN "STORE" IN OLD-FASHIONED STREET



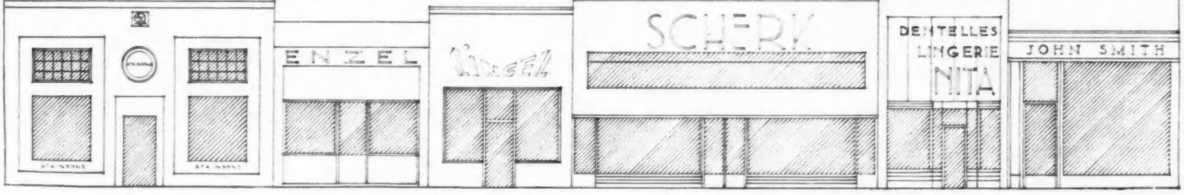
JUXTAPOSITION OF STORES PRODUCING EFFECT OF JERKINESS IN THE ARCHITECTURE OF A STREET



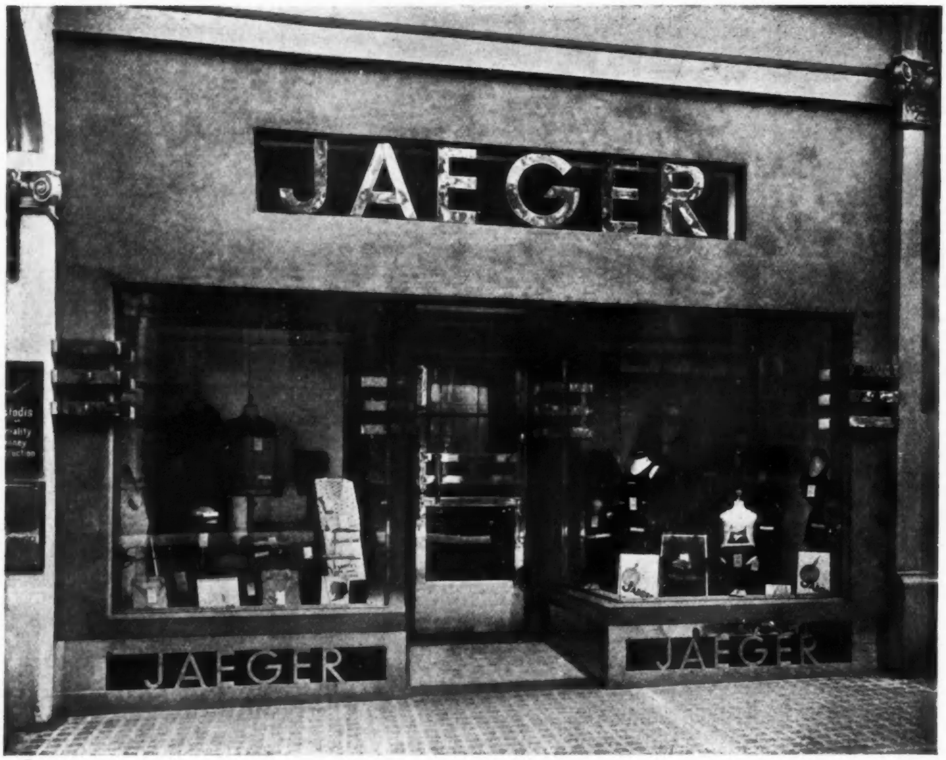
A STREET OF MODERN SHOPS SHOWING DISCORDS IN FENESTRATION

The first drawing is presented as an example of bad manners in architecture—contemporary lack of respect for the old civilities—and with the author's abhorrence of the result no one would quarrel; but whether, sentimental attachments being forgotten, the intruder in this case may not be approaching the ideal type aimed at by its outraged neighbours is a possibility to which he gives far too little consideration.

This point is well brought out in the second drawing, where the row of imaginary "stores" that Mr. Trystan Edwards holds up to ridicule seem to have at any rate the germ of just that continuity that he rightly seeks. Mr. Trystan Edwards has an unfortunate way (unfortunate, that is to say, for the persuasiveness of his own arguments) of making the most "modernistic" architecture look charming when he draws it. In the other two illustrations he has, through his tactful selective sense, unconsciously demonstrated the fact that the modern idiom, even when caricatured as it is here (and often is in practice) is actually a direct descendant of the very Regency tradition whose passing he so regrets.



SOME MODERNISTIC SHOP-FRONTS SHOWN IN JUXTAPOSITION



This photograph is chosen from Mr. Trystan Edwards's book to illustrate an important consideration that he altogether ignores when he discusses the problem of scale in relation to shop design—the part played by the contents of the window in recovering the human scale where the use of plate glass in the modern store causes it to be lost. When the whole street is being considered the human scale does not nowadays play any part, since the traffic-unit is the unit on which the street is based ; the personal element being relegated to the pavement and the ground floor shop-front of which it forms a part. Here the contents of the window must be considered as one of the elements in the design.

of lighting and display. He would seem here to have allowed his personal affection for Nash's Regent Street, to divert him from his usual sensible and practical way of thinking ; for neither of his two supplementary reasons for recommending the Regency type are at all satisfactory—the first that the " reflectory quality of stucco " makes it the most suitable material for nocturnal illumination, whereas in practice is not the usual form of display-lighting after dark an illumination of the shop-window itself leaving the structural surround as a dark frame ? and the second that the modern use of plate glass produces an unpleasing enlargement of scale in the lower story ; but he forgets that the sheet of plate glass will seldom read as one gigantic unit, the eye being drawn beyond it to the display of goods inside the window which serve to bring it down again towards the human scale and so introduce that sense of continuity between the inside of the shop and the outside that is so necessary in order to create the feeling of invitation to the passer-by which is, after all, the chief purpose of the shop window.

For it is a sound axiom that the closer an architectural feature approaches to the human scale the greater is its power of slowing down a stream of traffic passing it, a general application of this principle being the concentration of detail around the doorway of a Georgian house, and an extreme case being the effectiveness of placing in a shop window a dummy human figure which produces an exact balance of scale inside and out and tends thereby to bring passing traffic to a halt.

In the chapter on lettering it is unfortunate that Mr. Trystan Edwards forgets his own admirable precepts concerning the relation of single shops to their neighbours and assesses each example solely on its ability to " tell its tale effectively." As Mr. Edwards says, " there is no end to the number of devices that may be employed to give prominence to lettering," and some system of standardized lettering is surely one of the most obvious methods of giving an effect of homogeneity to a row of shops.

Despite these occasional inconsistencies, this is a valuable study and Mr. Trystan Edwards's disarmingly simple and ingenuous way of writing conceals, as all who are familiar with his writings will expect, some thoroughly considered ideas on a subject of the greatest importance in the preservation of our urban amenities.

J. M. RICHARDS

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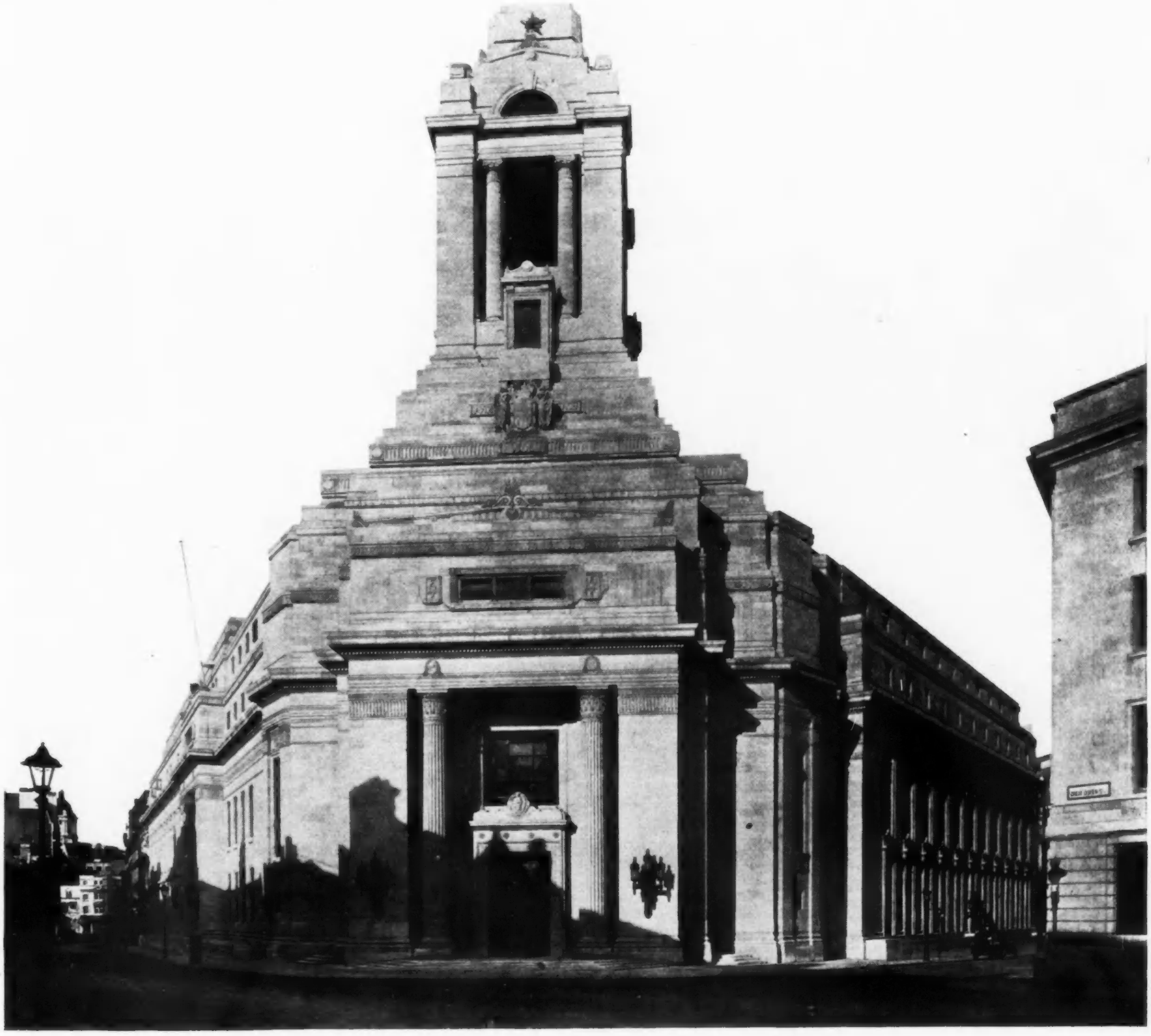
Books Received

Touring England by Road and Byway. By Sydney R. Jones. London : B. T. Batsford, Ltd. Price 5s. net.

English Interiors in Smaller Houses, 1660-1830. By M. Jourdain. London : B. T. Batsford. Price 15s. net.

The Story of Montacute and Its House. By H. Avray Tipping, M.A. (with notes on the Heraldry by Oswald Barron). London : Country Life, Ltd. Price 1s. 6d. net.

THE MASONIC PEACE MEMORIAL



[*SOME NOTES BY A. TRYSTAN EDWARDS*]

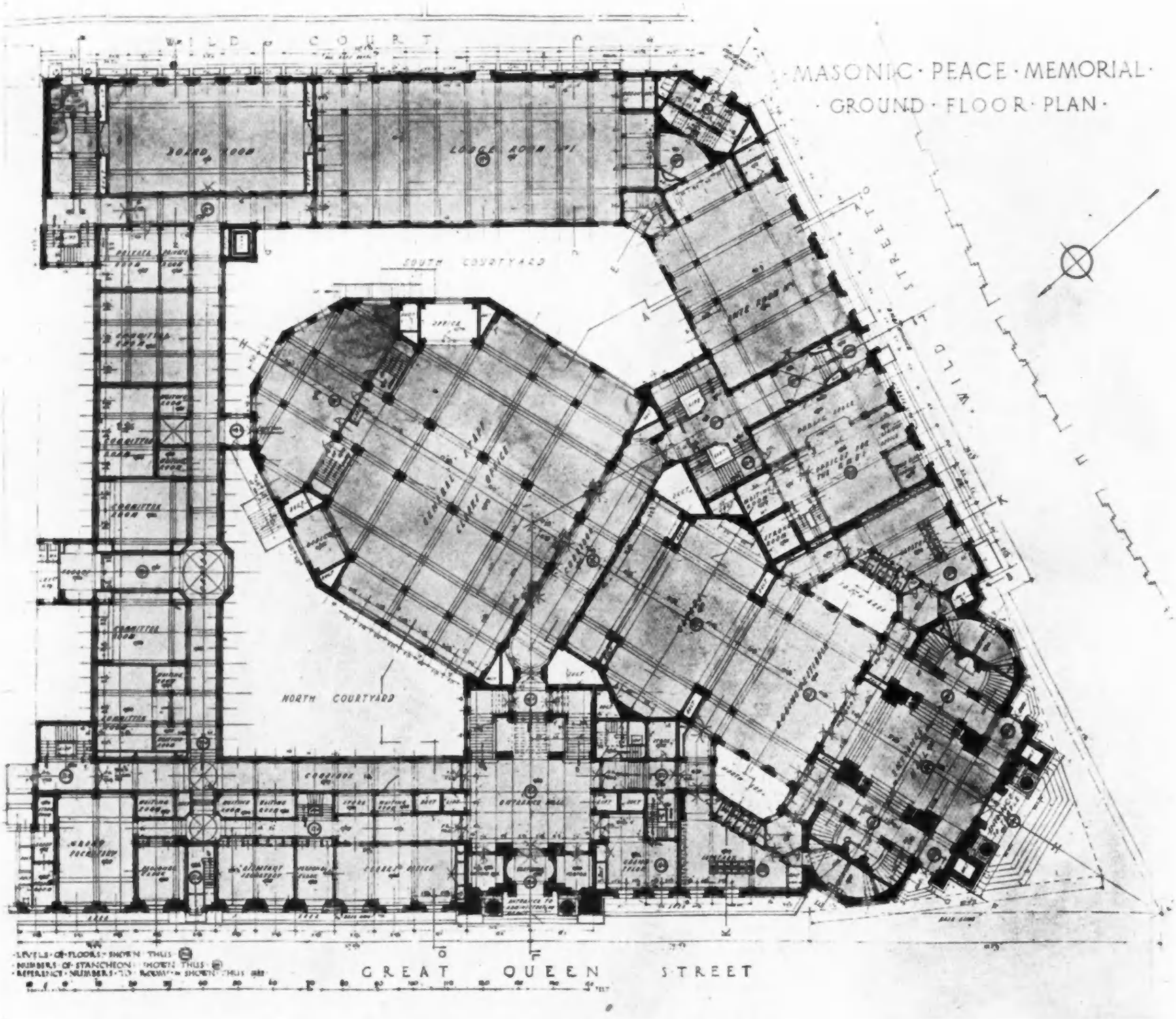
Erected as a great central home for English Freemasons in the Metropolis of the Empire and in memory of the brethren who fell in the war, the Masonic Peace Memorial was inaugurated in 1919 by the Grand Master, H.R.H. the Duke of Connaught.

After much deliberation as to the method to be adopted to obtain a design, it was decided to invite all architects of British nationality to submit schemes in a preliminary competition, and in March, 1925, designs were received from 94 architects. The authors of 10 of these designs were then invited to participate in a second competition and send in further and more detailed drawings on amended conditions and instructions. In May, 1926, the assessors presented their report, with the result that H. V. Ashley and Winton Newman, FF.R.I.B.A., were selected to carry out the work.

The area covered by the Masonic Peace Memorial Building is over two acres in extent. The streets at the junction of Great Queen Street and Drury Lane were narrow and badly laid out, but now the upper part of Great Queen Street has been widened and a large circus or place formed at its junction with Drury Lane and Long Acre, bringing the latter more into line with Great Queen Street. It is noteworthy that the great tower over the main entrance to the Masonic Peace Memorial is practically on the centre line of Long Acre, so that it will close the vista of that street.

The plan of the first floor better than any other indicates the motif underlying the whole design, and it governs the lay-out of all the other floors. It will be observed that the temple and its approaches is the dominating factor, with the grand officers' rooms, museum, library, reading

THE MASONIC PEACE MEMORIAL:


·MASONIC·PEACE·MEMORIAL·
·GROUND·FLOOR·PLAN·
WILD COURT
WILD STREET
GREAT QUEEN STREET
BOARD ROOM
LODGE ROOM No 1
SOUTH COURTYARD
NORTH COURTYARD
·LEVELS·OF·FLOORS·SHOWN·THUS·
·NUMBERS·OF·STANCHIONS·SHOWN·THUS·
·REFERENCE·NUMBERS·TO·ROOMS·SHOWN·THUS·

GROUND FLOOR PLAN

and writing rooms, etc., surrounding it, while the whole of the floor may be regarded as a great reception suite with or without bringing the grand temple into use. The extreme dimensions of the new temple are 120 ft. long by 90 ft. wide and 62 ft. high, about three times the area of the present temple.

The ground floor plan shows the method of approach to the temple, with large robing vestibule, cloak room, etc., and the remaining portion of this floor is taken up by the grand chapter room, the administrative department, the board room, and the offices of the Royal Masonic Benevolent Institution.

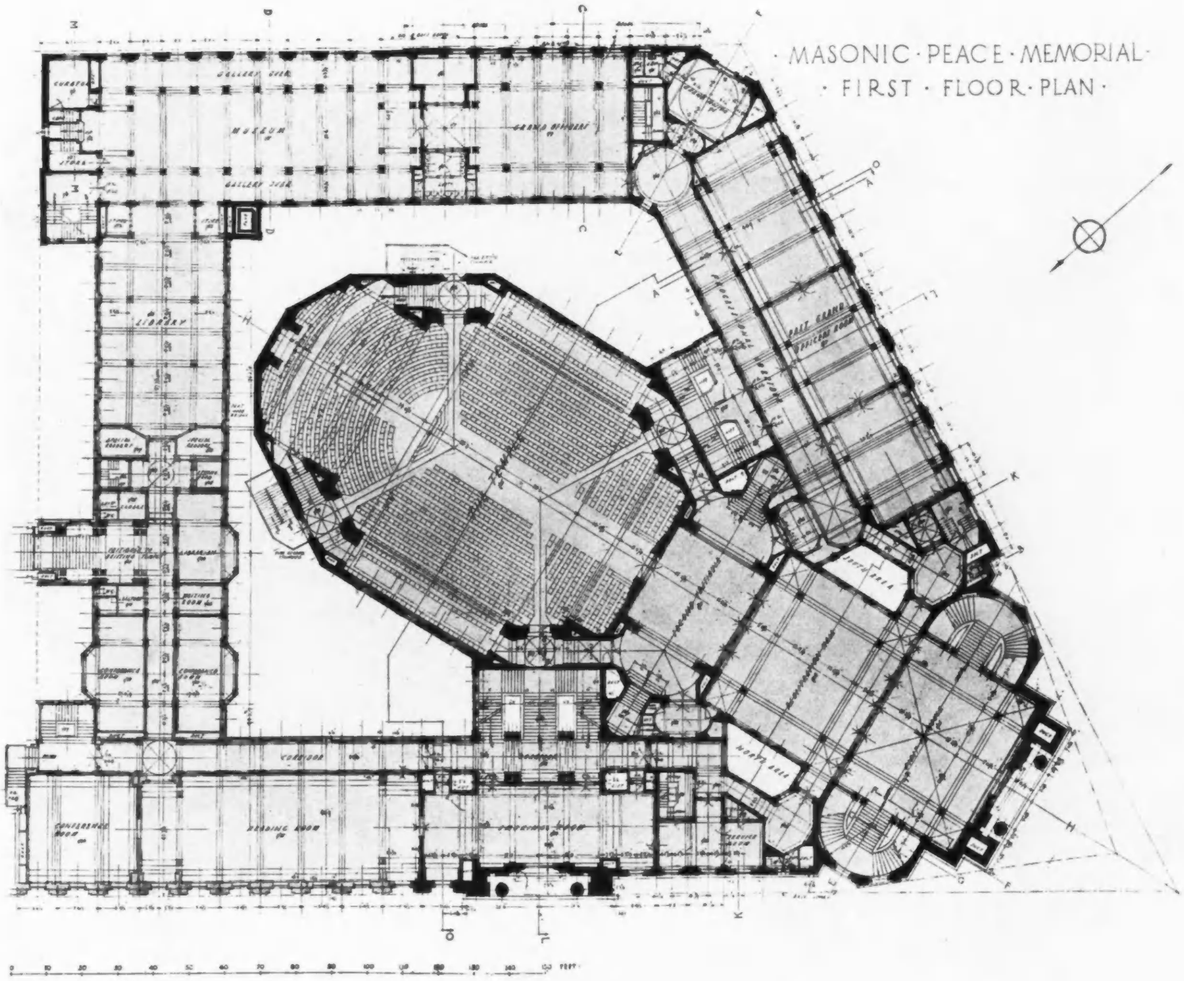
The lower ground floor, it may be added, is given up to registration and muniment rooms and other very extensive accommodation for the working staff, heating and ventilating plant, and storage.

The second and third floors are entirely occupied by lodge rooms with ante-rooms, etc. There are sixteen of these lodge rooms of varying sizes, accommodating from 50 to 400 brethren each. These lodges, together with the grand temple, will house some 4,600 brethren.

The planning is so contrived that a complete circuit round the buildings on all floors is obtained, while there are staircases and lifts in four different positions, thus insuring easy circulation and convenient access to an exit from each lodge, while the approaches to the Connaught Rooms have been increased in number on each floor, and generally made more spacious and convenient.

It will be observed that the temple entrance hall, with robing vestibule and cloak room beyond, form a compartment of the plan which is formally and symmetrically related to the two other principal entrances to the building, namely, that in Great Queen Street and in Wild Street. These entrances are connected, the former being the principal approach to the building for all the brethren when the temple entrance is not in use ; it also serves as the

DESIGNED BY H. V. ASHLEY AND WINTON NEWMAN



FIRST FLOOR PLAN

approach to the administrative departments. The connection between the two entrances is by means of a broad corridor behind the beforementioned cloak room, which corridor, in addition, gives access to the general staff office.

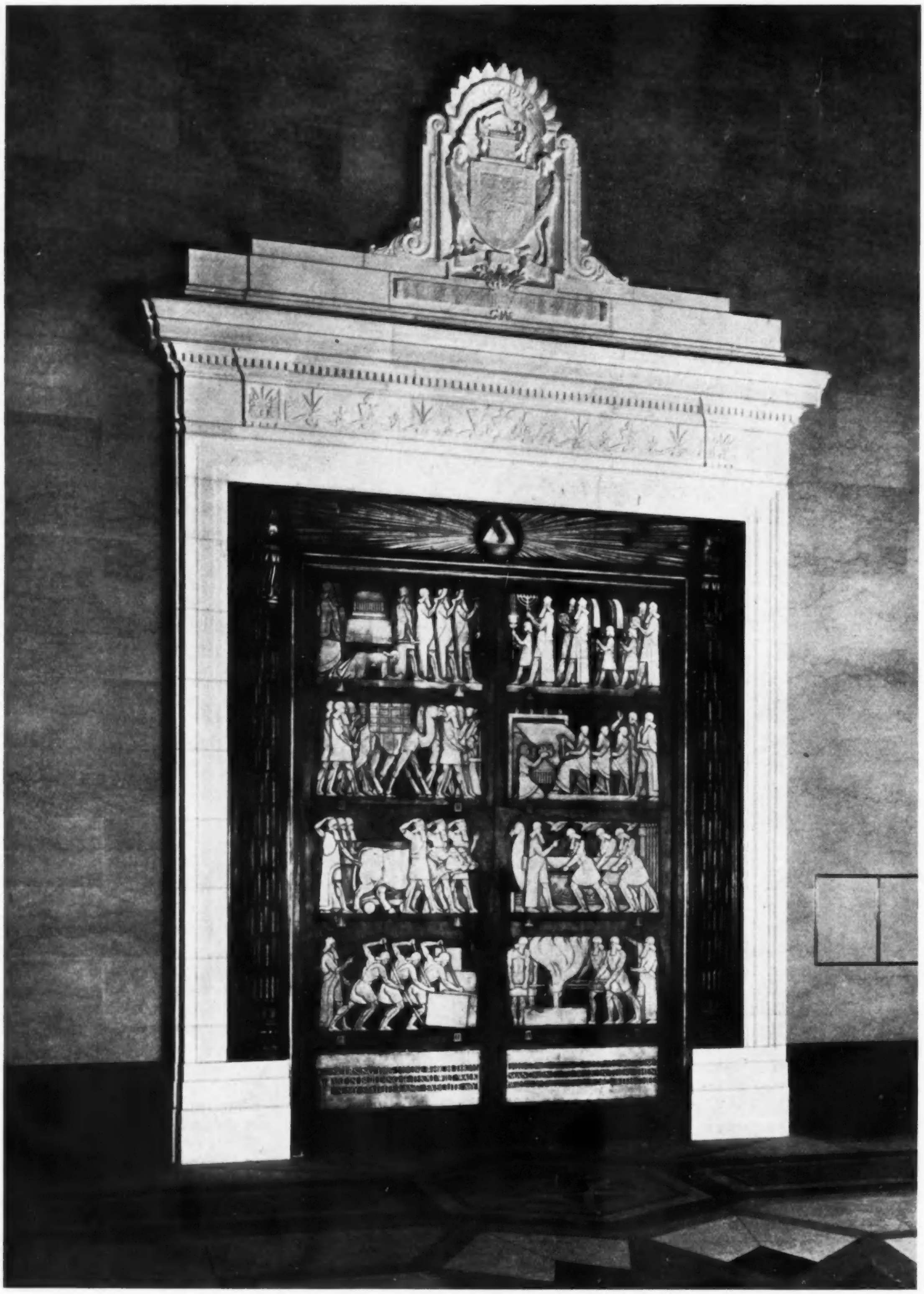
Thus we see that there is a complete and independent circulation, leaving the temple entrance hall with its robing vestibule in an isolated section of the plan.

The first floor also shows the same formality of arrangement, except that here there is a higher degree of unity inasmuch as the whole of the accommodation of this floor is devoted to masonic and social purposes.

There is no question that by placing the temple entrance at the corner, manifold advantages were obtained. In the first instance, the series of processional rooms leading to the grand temple could be planned in such a way that this supremely important chamber could be placed in the centre of the site. Hence the temple has not only external walls on three sides, but it is perfectly quiet. Moreover, by so placing the temple, the architects obtained complete freedom to make its plan of any shape without being obliged to modify its design in order to take account of the façades towards the street; further, and this is a very important point, the necessary escape stairs could be situated in a place where they would be entirely inconspicuous.

Before describing certain outstanding features of the building, it may be well to indicate the method of approach to the grand temple, involving, as it does, masonic ceremonial. This has determined the disposition of the principal rooms. Proceeding through the temple entrance, at the junction of Great Queen Street and Wild Street, brethren go through the entrance hall to the large robing vestibule with its adjacent cloak rooms and lavatories; from thence, ascending the winding staircases on either side, they arrive at the main ceremonial floor of the building, comprising the first vestibule,

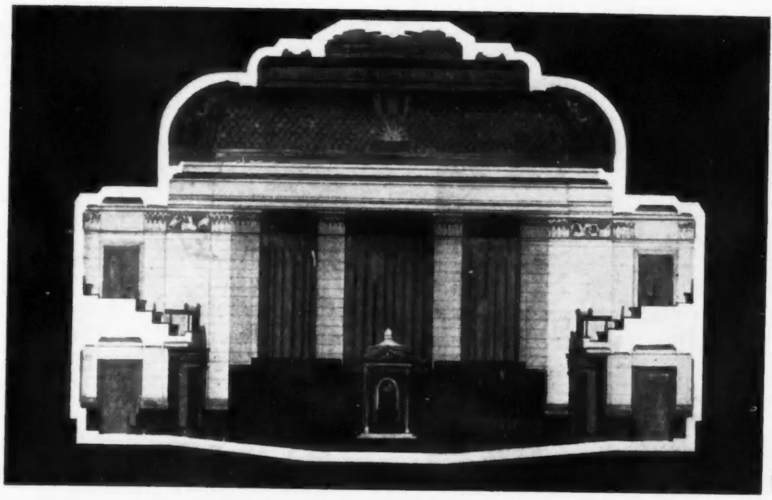
THE MASONIC PEACE MEMORIAL:



THE ENTRANCE TO THE TEMPLE

The bronze doors were designed by Walter and Donald Gilbert

DESIGNED BY H. V. ASHLEY AND WINTON NEWMAN



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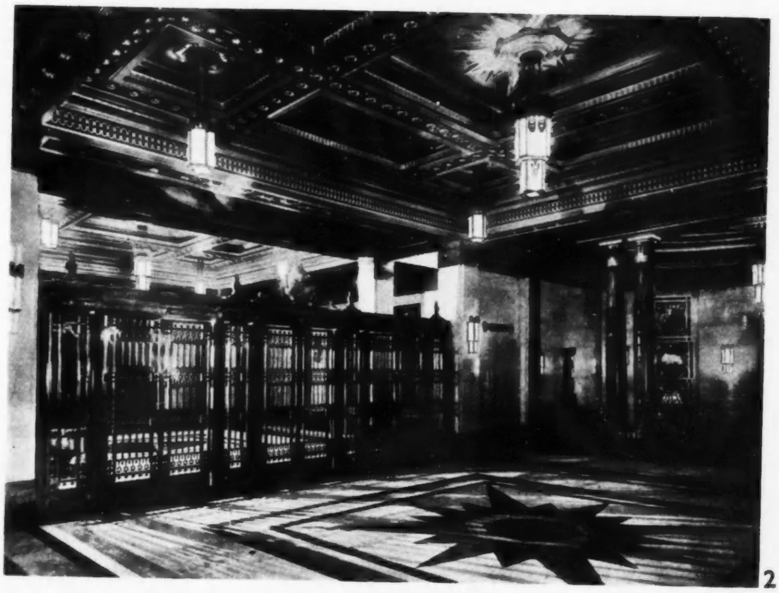

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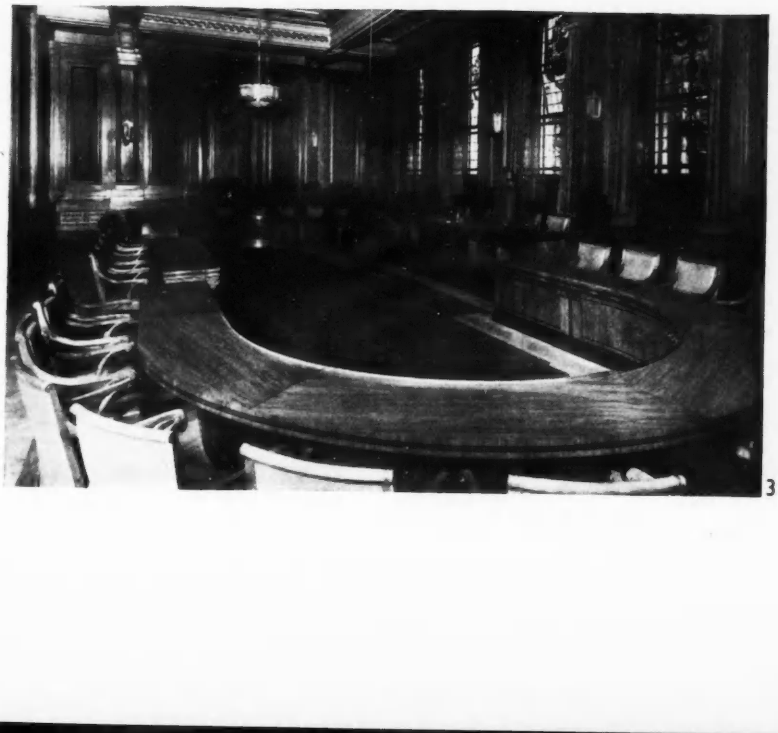

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registration room, second vestibule, and the grand temple itself. From the first vestibule, on the walls of which are recorded the Hall Stone Lodges, the brethren proceed to the registration room, and having registered, they pass through to the second vestibule ; in this vestibule are placed not only the principal entrance to the grand temple, but also the subsidiary entrances and the approach from the processional corridor. The grand master's suite, with private entrance, and the present and past grand officers' rooms are approached from this corridor when the procession lines up prior to the formal entry into the grand temple.

The accommodation required in the temple itself has been secured by recesses at the sides, with balconies over and a large dais. The shape of the dais, with the organ cases in gold on the side walls, assists in concentrating the interest on the focal point of the temple, the grand master's throne; with the pro-grand master and deputy grand master and other high officers of Grand Lodge on either side, while the gold brocade curtains on the back walls add to the dignity and scale of the chamber. The walls are lined with Ashburton marble as a base, and Botticino marble over and including the great cornice, the whole surrounded by the mosaic cove, 15 ft. in girth, and a coffered and decorated ceiling over.

The principal doors to the temple are in bronze, enriched with ornament, and were designed and executed by Walter Gilbert and Donald Gilbert, who were also responsible for a number of the electric light fittings. The artificial lighting of the temple is in the main concealed from view on the main cornice striking across to the ceiling, while the dais and the balconies and elsewhere are arranged with soffit lighting.

As to the lodge rooms generally, a characteristic feature of them is that they have a row of windows on one side, having either grilles or curtains which are exactly balanced on the opposite wall; so that, when the lodges are working under the usual conditions of artificial light, the rooms have the appearance of being symmetrically disposed on both sides. The ceiling treatments display a large variety of types of coffer and louvre, and it is worthy of note that the louvres which are needed to serve the practical purpose of admitting fresh air have been designed in such a way that they form decorative elements harmonizing with other features of the room.

The grand master's room, grand officers' rooms, the library and museum and the board room have hardwood panelling and enriched plaster ceilings, and panelled walls.

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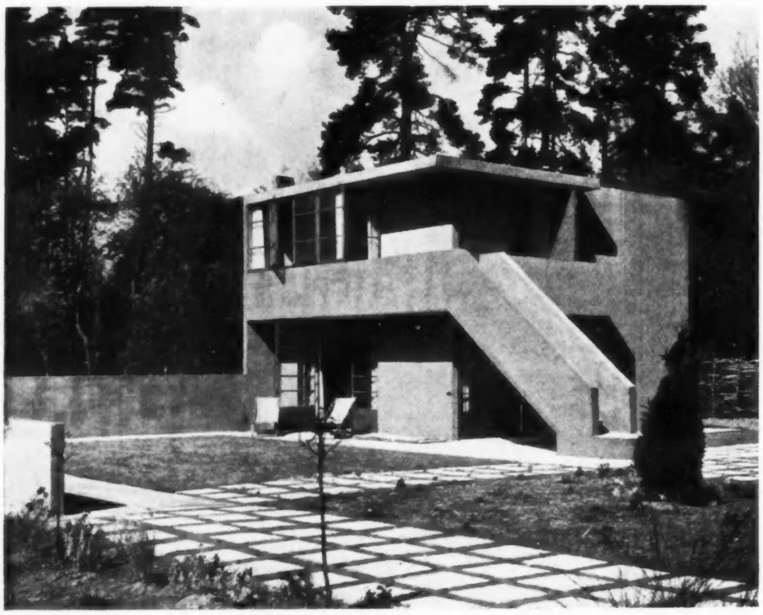
1. *One of the preliminary sketches for the interior of the Temple.*
2. *View from the first vestibule looking towards the Registration Hall.*
3. *The Board Room.*

THE HOP FIELD, ST. MARY'S PLATT, KENT



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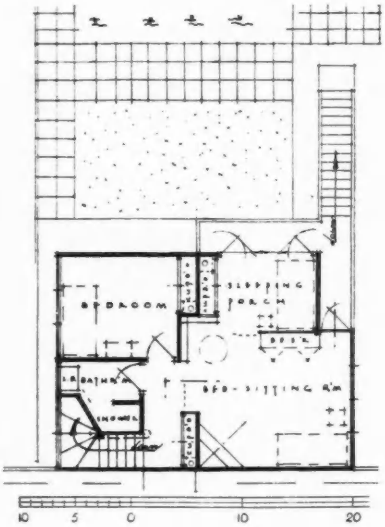
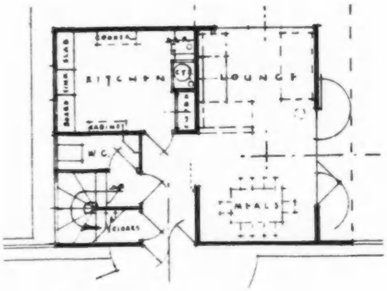


FIRST FLOOR PLAN

This house, is constructed entirely of reinforced concrete. The exterior is finished in cement of a subdued green colour which is designed to harmonize better with the surrounding countryside than the more usual white. Two notable features of the house are the three-foot overhang of the upper floor, to give increased bedroom space and to provide protection from sun and rain to the living rooms beneath, and the outside staircase which leads from the upstairs sitting-room and sleeping-porch down into the garden. The staircase walls, being reinforced, are one of the principal supports for the upper floor and form a continuous beam across the house. The cantilever construction has allowed folding doors to be provided to the sleeping-porch so that the whole wall can be thrown completely open. The ceilings over both ground and first floor, which are a single unbroken slab of concrete, are without beams or mouldings, and in every instance the windows are carried up flush with the ceilings. The entire interior of the house is lined with a half-inch layer of Celotex insulating wallboard which was placed in position before the concrete was poured.

The photographs show: 1, *The exterior from the south-east;* 2, *The sitting room;* 3, *A view looking into the sleeping-porch through the bed-sitting room on the upper floor. Note the obscured glass window over the desk.*



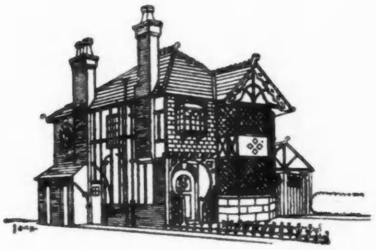
GROUND FLOOR PLAN

2

3

DESIGNED BY COLIN LUCAS

WHAT IS TO BE DONE ABOUT



THIS?

[Previous articles in this series have dealt with the pressing problem of uncontrolled small-house development from the point of view of the public, the speculative builder and the individual architect; also with the influence it is thought the Building Societies may have on small-house design.

Today, Mr. C. B. Willcocks discusses the possibilities that lie in the establishment of Advisory Architectural Panels for dealing with the same problem.—ED., *A.J.*]

15. Advisory Architectural Panels

[*By C. BIRDWOOD WILLCOCKS*]

IN the series of articles on this subject several suggestions have been made for preserving the country from the depredations of the speculative builder. It appears, however, that none of the proposals yet made would have a very far-reaching effect.

For architects to act as speculative builders would be helpful, but as comparatively few will probably do so the houses they build are not likely to have much effect on the subject generally.

If building societies will undertake only to grant loans on well-designed houses this will be most valuable. In the past, however, such societies have generally advanced money on completed houses. Building societies, it must not be forgotten, were formerly chiefly concerned with the financial and not the æsthetic side of the question. In view of the proposals contained in the Housing (Financial Provisions) Bill, recently before Parliament, it appears that building societies may in the future be much more actively concerned with the actual building of small houses, and so it is very desirable that strong representations should be made to all such societies on this matter.

To prevent the further spoliation of the countryside by badly-designed buildings, apparently the only effective way yet devised is that of the Advisory Architectural Panels. These panels, many of which have been set up as the result of joint action by the R.I.B.A. and the C.P.R.E., are functioning very satisfactorily in some of the more enlightened districts and, as anticipated when the advisory panel scheme was originated, are preventing the erection of many undesirable buildings.

The ways in which the advisory panels work vary in different districts.

In some a few central panels have been formed to which several local authorities submit such designs as they think are open to criticism. The method does not appear very satisfactory, since designs of which the local authorities, or their surveyor, approve are often not submitted to the panels, and so, as few laymen are competent to judge properly the appearance of buildings from geometrical drawings, unsatisfactory designs may inadvertently be passed.

A system which appears to be preferable and which has been adopted by some architectural societies is the appointment of two, or more, members of the society to help, if desired, each local authority in the district. After the members have been appointed, all the local authorities concerned are advised by the society, or preferably by the C.P.R.E., of the action taken, and suggestions are given as to how the local authorities can best make use of the panels. They are also advised that no charge will be made for the advice given by the panel architects on behalf of the panels, travelling and other out-of-pocket expenses only being payable.

The existence and objects of the panels should also be made known through the local press.

In districts in which this method has been adopted, when a local authority has decided to make use of the panels, a form of procedure which has been found satisfactory is as follows:

The local authority arranges for all plans of new buildings, etc., to be submitted in duplicate a week before the meeting at which they are to be considered by the Council. One copy is immediately sent to the advisory architect, who returns it with his comments and criticisms, if any, within two days. In the case of criticized designs a copy of the panel architect's report is at once sent to the building owner, or his representative, and he is asked to reply before the Council meeting. The criticisms and replies are then submitted to the Council, who decide what action to take in each case.

When a panel architect is dealing with a plan which he feels should be improved, to explain properly his ideas it is often necessary for him to re-design the elevations and submit with his report sketches showing how this might be done, in addition to suggestions with regard to lay-outs and materials. Great care must, of course, be exercised that the suggested improvements do not materially increase the cost of the building.

As will be realized, this often involves a considerable amount of work, which is a reason for allotting not less than two architects to advise each local authority.

If preferred, the advisers can act independently, each dealing in turn with all the plans submitted at a meeting. An advantage of this procedure is that it prevents one man's ideas from becoming perhaps in time too noticeable in a district. For the same reason the personnel of the panels should be changed occasionally.

The work of the advisory panel of architects in this matter may be likened to that of a bench of magistrates, both working honorarily for the public good.

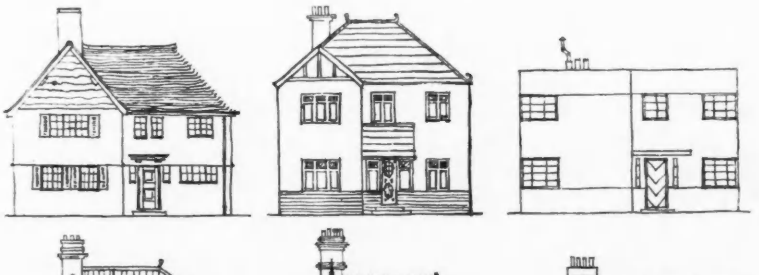
As the panels become more generally recognized, the work of the architectural advisers will be reduced, since many speculative builders and others, knowing that their plans will be examined by the panel, will before long undoubtedly consider it expedient to submit plans which are not too open to criticism.

In most districts in which panels are already functioning they are doing so very satisfactorily in an advisory capacity only, and the building owners are not forced to take their advice. It is found in practice, however, that numerous builders are quite willing to do so, and many have expressed appreciation for the help given. There will always, of course, be exceptions, and later, when the work of the panels is better understood and valued, local authorities will doubtless take the necessary steps under recent town-planning legislation to enable them to deal satisfactorily with building owners who are not open to advice.

In many cases it has been found that builders are quite willing to agree to all the suggestions of the architectural advisers, and successes of 50 per cent. to 100 per cent. are reported by the panels.

When advisory panels have been organized throughout the country broadcasts should be arranged to draw attention to the panels and explain why they are required and how they act and to urge the local authorities to make the fullest use of them.

In conjunction with the advisory panels, it appears very desirable that the Longden panel, or some similar organization, should arrange to supply designs to speculative builders at rates



Striking variety of effect can be obtained (and, in fact, usually is obtained) by our ingenious friend, the builder, from the same plan form. The position of door, windows and chimney, it will be noticed, remains the same in each case. The modern one, of course, must not have a pitched roof, and the window must be on the corner even if it doesn't go round it.

which they are willing to pay and which, when some repetition is involved, will not be unremunerative to architects.

That the architectural profession is the only one that can effectively help the country in this matter and prevent the continued wholesale spoliation of the English countryside by the erection of unsuitable buildings is generally recognized. It is, therefore, sincerely hoped that the allied societies who have not yet done so will appoint advisory panels without delay and that all architects will work enthusiastically and energetically for the panels to make them known, appreciated and effective.

EASY TERMS
PLANS APPROVED

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Adelphi Estate Bill

BY the narrow majority of 18 the House of Commons has give a second reading to the Adelphi Estate Bill.

When the measure came before the House, Sir Wm. Davison moved its rejection. He said that the Bill sought first to repeal the statutory restriction, dating from 1771, which limited to a height of 20 ft. any building erected on that part of the estate known as the foreground, with an area of 30,000 square feet, which was situated immediately in front of Adelphi Terrace. It also sought to execute certain building works. If the Bill became law it would deprive the public of rights. Its promoters contended that the public had right of access to the Terrace for business purposes, but that they had no rights of view. The City of Westminster local authorities, however, had maintained the Terrace as a public thoroughfare, from which the public had always had the privilege of enjoying the beautiful view over Embankment Gardens. As compensation for the acquisition of full building rights the trustees of the estate were prepared to surrender sufficient land to widen Adam Street and Robert Street to 40 ft. But compensation was neither asked for nor desired in return for the destruction which was contemplated. Why should the public give up Adelphi Terrace with its beautiful view and have substituted for it a tunnel passage way with a funnel in the middle? Again, why should the public rights in the Embankment Gardens be interfered with? Those rights were being enjoyed more and more every day. Why should Parliament, by passing this Bill, interfere with the freedom to plan a dignified northern approach to Charing Cross Bridge? The promoters of this Bill had no planning scheme; and why should Parliament not wait until some plan was put before it which could be considered? If that House facilitated the pulling-down of the Adelphi, one of the most beautiful pieces of town-planning which existed, it would participate in something which he thought most members did not desire to see.

Sir A. Steel-Maitland, in seconding, said that it was pointed out by the promoters of the Bill that they had a perfect right to pull down Adelphi Terrace now if they so wished. The question was whether they would do so if they were not given power to build above the 20 ft. limit; whether if they were not given that power they would go on with the big scheme which was proposed. It was quite clear that if they passed this Bill, and gave power to the promoters to build on that low ground, then indeed they would make sure that the Terrace would be destroyed. As for the employment which it was said this new scheme would give, employment in the building, trade resulting from the erection of offices or flats depended on demand, but within a mile of Adelphi Terrace, in 10 new buildings, there were more than 1,250,000 square feet of office space which had never been used. There were plenty of other sites if there was a real demand. All authoritative opinion was that it would help to spoil the aspect of the Embankment from the Thames, already much spoilt, and do away with a building historic in value.

Sir Wm. Ray, who supported the Bill, said that the more he considered the Bill the more convinced he was that it needed examination. In considering this case, the complete change in the character of the Thames Embankment had to be borne in mind. He recalled that when the Embankment was dominated by Somerset House Waterloo Bridge fell into the picture. Today the Embankment was dominated by the Shell-Mex, Savoy, Unilever, and, in the distance, Bush House buildings. One site was left on which the question of development was ripe for consideration. This was not a matter for decision by the London County Council or the Westminster City Council, but for a Committee of Parliament. The scheme before the House would not interfere with any one of the six Charing Cross schemes submitted to the L.C.C. Advisory Committee.

Sir D. Herbert, the Chairman of Committees, said that although the owners of the Adelphi Estate had power to pull down Adelphi Terrace, in his opinion they would not do so if they did not get the powers asked for in the Bill. The question of possible interference with the Victoria Embankment Gardens was obviously of a character which required the attention of Parliament, and one in which the House should protect the rights of the public. The question of future developments in connection with a possible new Charing Cross Bridge was also a matter on which a Committee should decide what were the facts. The House, in the slender hope of saving these old buildings, ought not to refuse to petitioners to Parliament what they had no hesitation in granting to its petitioners if they did not suffer from the fact that their property was one in which others, who were not the owners, felt, and felt properly, such a great interest.

Mr. Attlee opposed the Bill. He did not want to see London swept away and the City replanned like a City of the Middle-West of America.

Captain Dower, the owner of a small

OUR SECRETARIES

• 5 •

JOHN SWARBRICK

MANCHESTER SOCIETY OF ARCHITECTS

MR. JOHN SWARBRICK, F.R.I.B.A., has been the Honorary Secretary of the Manchester Society of Architects for many years. He was a member of the Council of that Society before the war. The Manchester Society is the largest of the provincial Societies allied to the R.I.B.A., its area extending from Cumberland to Staffordshire, and including most of Lancashire and Cheshire. Mr. Swarbrick was a student at both the Royal Academy of Arts and the Architectural Association, London, and obtained silver medals for his work from both bodies.

He practises in London as well as in Manchester, and he is probably most widely known as a specialist in rights of light cases. As the inventor of the Daylight Factor Photo-Theodolite, he has been called upon to give evidence regarding amounts of light lost and other matters, in most of the leading cases in Court, in recent years. He is a member of the R.I.B.A. Practice Standing Committee, and represented the Royal Institute on the Joint Committee on School Lighting, 1930-31; at the International Illumination Congress in 1931; and on the Committee on the Law of Ancient Light, in 1932. He is the author of the standard work on the assessment of compensation in Easement of Light cases. He also wrote a biography of the Adam brothers, for Messrs. Batsford, in 1915.

part of the Adelphi which did not come under the provisions of the Bill, said that the promoters would not pull down Adelphi Terrace if they were unable to build on the foreground. London would suffer an irreparable damage if the Adelphi estate were wiped away.

Mr. Greenwood said that if they destroyed what was of beauty in Adelphi Terrace, it would be gone for ever. There was something there which embodied a spirit which ought to be maintained. He hoped the Bill would be rejected in the interests of town-planning and organized developments.

Mr. D. G. Somerville said that the new buildings on the riverside had a certain majesty and grandeur. The Adelphi, as a place of peace and beauty, was overshadowed by these buildings, and could be retained no longer.

The Bill was read a second time by 117 votes to 99—majority, 18.

Sir K. Vaughan-Morgan then moved an instruction to the Select Committee which is to consider the measure to take into consideration the effect of the Bill on the architectural and artistic aspect and other amenities of the riverfront, and, in the event of their approving the preamble of the Bill, to insert a clause in it requiring that the plans of any new building which it is proposed to erect shall first be submitted for approval to the Royal Fine Art Commission.

LAW REPORT

BREACH OF COVENANT TO REPAIR

Beresford and Others v. *R. Easton.—Official Referees' Court. Before Mr. C. M. Pitman, K.C.*

THIS was an action by Mrs. E. Beresford and others, as freehold reversioners of premises situate in Surrey Lane, Battersea, against the defendant, Mr. R. Easton, for possession, and also for £240 damages for alleged breach of covenant to repair.

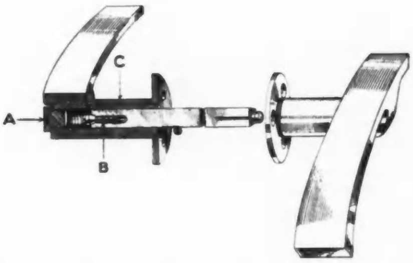
Mr. A. Pugh, for the plaintiffs, said the defendant was the lessee of the premises and also the occupier with ten sub-tenants. The lease was formerly held by the defendant's wife's father, who, when he died, left the lease to his daughter, now the defendant's wife. The lease expired in June 1932, and the damages for breach of covenant to repair had been agreed at £230. The issue for the Court was whether Mr. Easton was the proper person to sue or his wife, Mrs. Easton. In the circumstances of the present case plaintiffs contended that Mr. Easton was liable and the proper person to sue.

Mr. Cyril Salmon, for the defendant, submitted that the plaintiffs had sued in the wrong capacity. They were not owners but trustees, and under the circumstances he contended that defendant was entitled to judgment.

Mr. Pugh asked that he might have liberty to amend the pleadings, making the plaintiffs sue as trustees.

The Official Referee allowed the pleadings to be amended.

After legal argument, the Official Referee gave judgment for plaintiffs as against Mr. Easton for £230 with costs. He said that for years the defendant had paid the ground rent and insurance and had received the rents for the property, using a room on the ground floor for an office. Defendant was an executor under the will of his wife's father and had entered into possession. Having regard to this and the fact that defendant was an assignee made him liable for the repairs.



TRADE NOTES

BY F. R. S. YORKE, A.R.I.B.A

Lever Handles

THE door handle shown below was designed by Scott, Chesterton and Shepherd for the Shakespeare Memorial Theatre, and was made, for that job, by James Gibbons, who were, I understand, pioneers in the production of the simplified lever handle.

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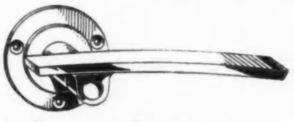
The type has since been standardized, in a slightly modified form, to meet recent improvements in methods of spindling and fixing. The new fixing is of a sleeve and patera type, and though applicable only to certain designs is a great improvement on the old method, particularly for work in aluminium alloy, since this material is not equal to bronze so far as wearing qualities are concerned.



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The diagrammatic section above indicates the method of fixing. The expanding spindle B allows fine adjustment, and should ensure absolute rigidity. It can be applied to any lever handle provided the design incorporates the removable patera A, giving access to the adjustment screw.

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The price per set, including the improved fixing, is 12s. in bronze, 13s. 6d. in anodium bright, 14s. in anodium anodized and 14s. 6d. in anodium anodized and dyed.

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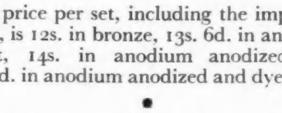
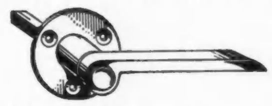
Anodium is a registered trade mark for a group of aluminium alloys possessing high physical and anti-corrosive properties in themselves, and suitable, also, for anodic oxidization. Anodium metal in bright form, although anti-corrosive, should be restricted to internal use and should be cleaned periodically.



Anodic Oxidization and Surface Dyeing

Anodic oxidization, an electro-chemical process, can be applied satisfactorily to anodium alloys. The surface of the metal undergoes a chemical change whereby it is converted to a translucent oxide of intense hardness. This oxide increases the anti-corrosive properties of the metal, making it suitable for external use unless the film be of a very thin iridiscent type. The thin film is suitable for interior work, and requires no attention beyond the removal of dust and dirt deposits. When metal covered by the thicker film is used for exterior work, occasional washing down, to remove atmospheric deposits, is advisable.



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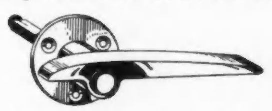
Sulphuric acid and chromic acid are the bases of the two distinct methods in general use for obtaining the oxide film. In each case an electric current is passed from the article to be anodized to the container of the electrolyte. The oxide film commences to form rapidly, and continues to thicken until the process has continued for about an hour, after which time there is little change in the film thickness.



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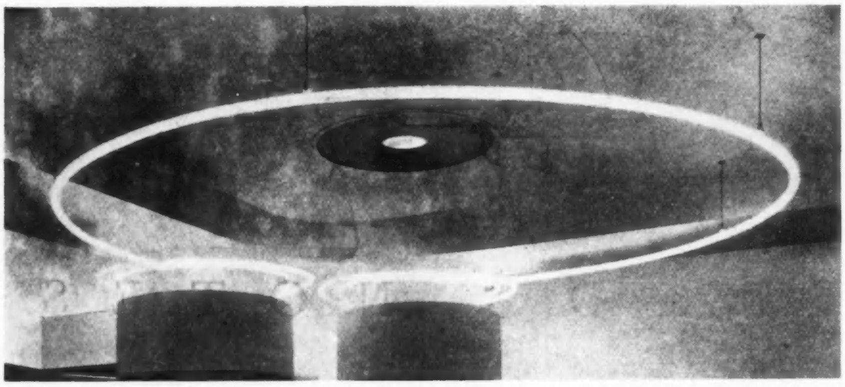
Numerous surface finishes can be produced by varying the thickness of the oxide. The anodic film can be dyed to almost any colour—not always, I feel, to the improvement of the natural shade. I am told by Messrs. Gibbons that, in their opinion, dyed metal should be restricted to interior work and, furthermore, should not be applied to portions of an article that are subject to continual handling.

Artificial Daylight

Illuminating engineers, experimenting with the reproduction of daylight by artificial means, have been confronted with many problems, those most difficult of solution being, I believe, the complete attainment of daylight colour values, the production of a lamp giving a constant quality of light throughout its life, and the finding of a system that is not unduly expensive in operation owing to the inherent inefficiency of colour correcting devices.



A continuous strip of Claudegen Sunlight tubing, forming five rings of light near the ceiling at Fischer's Restaurant, Bond Street, W. Architect, Raymond McGrath.

The ordinary filament lamp gives a much higher percentage of red light than is found in natural daylight, and in order to produce a light of the same colour as daylight it has been necessary to filter out the red rays by means of blue glass screens, or to direct light from its source towards a reflecting surface, coloured preponderantly blue, with areas of other colours in proportions calculated to reflect a light having the required colour composition.

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It was discovered some years ago that when CO_2 is enclosed in a glass tube and a high tension current passed through it, the gas becomes visibly radiant and gives off a light closely resembling north sky daylight, and the phenomenon has recently been developed commercially in England by G.E.C. as Claudegen daylight.

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This form of lighting is particularly suited to industries in which the quality of the finished product is dependent upon true colour perception during the process of manufacture. The tubing serves as general lighting and can be installed on ceilings or walls, or it can be arranged in portable units for inspecting colour combinations during manufacture.

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The light is constant, since there is no filament to deteriorate, and normal voltage fluctuations are of no consequence. The tube is 1¾ in. diameter and may be of any convenient length between 15 and 130 feet. There is an electrode at either end of the tube, and since it is advisable to keep the distance between the transformer and electrodes as short as possible, a U or circular shape is preferable to a strip running continuously in one direction.

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The gas in the tube is slowly depleted and is replenished by means of a small gas generator and valve, similar to a Kipp's apparatus. Replenishment, which costs about thirty shillings, is needed once in approximately 4,000 burning hours.

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Claudegen Sunlight, a new form of decorative lighting, used by Raymond McGrath, at Fischer's Restaurant, Bond Street, W., is based on a similar principle. The tubing is filled with a special gas, which, subjected to a high-tension electric current produced by a single transformer, becomes visibly radiant; a soft amber glow being induced by the ionization of the gas. The light, softly diffused and of low intrinsic brilliance, does not dazzle or strain the eyes.

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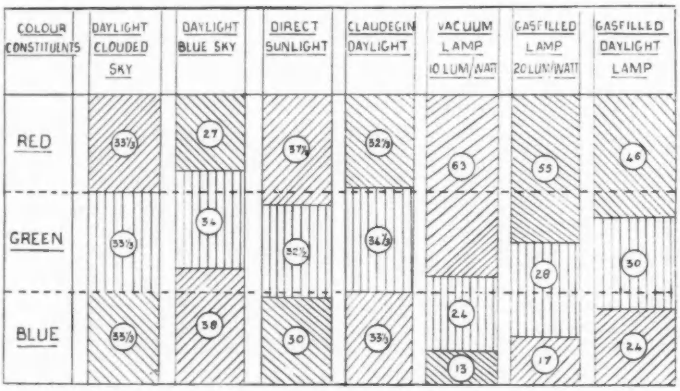
The arrangement of the tubing at Fischer's which is shown in the photograph above, is an illustration of the juxtaposition of the ends of the tube. The wattage per foot run varies with the length of the tube, which may, in the case of Sunlight lighting, be as much as 180 feet, for control by one transformer. The variations are as follows:—

Length of tube	Wattage per foot run
60 feet	31
100 ,,	28
180 ,,	23

The lumen output remains constant at 150 per foot.



A chart showing comparisons of natural daylight with Claudegen daylight and other forms of artificial lighting.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Masonic Temple, Great Queen Street (pages 83–87). Consultants: Burstall and Monkhouse, and A. W. Beuttell, electrical: Whitaker Hall and Owen, structural steel and reinforced concrete; J. Roger Preston, heating and ventilation; Hope Bagenal, acoustics; Bucknall and Ellis, assistants on furniture and colour decoration; the late George Murray, mosaic work; J. Wolff and Son, Ltd., decorative gilding; General contractors: Walter Lawrence and Son, Ltd. Sub-contractors: A. D. Dawnay and Sons, Ltd., steelwork; J. Jeffreys & Co., Ltd., heating and ventilating; Sturtevant Engineering Co., vacuum cleaning; Drake and Gorham, Ltd., electrical installation; W. J. Furse & Co., Ltd., electrical installation; Automatic Telephones, telephones; Le Grand Sutcliff and Gell, Ltd., artesian well and pumping plant; South Western Stone Co., Ltd., Portland stone; Morris Singer, bronze and iron; Birmingham Guild, bronze and iron; Samuel Haskins, bronze and iron; F. De Jong & Co., Ltd., fibrous plaster; G. J. Green and Sons, fibrous plaster; G. Jackson and Sons, Ltd., fibrous plaster; G. and A. Brown, fibrous plaster; H. H. Martyn & Co., Ltd., fibrous plaster; James Walker, fibrous plaster; E. J. and A. T. Bradford, fibrous plaster; James Gibbons, Ltd., metal windows; C. E. Welstead, Ltd., metal windows; Art Pavements and Decorations, marble; Fenning & Co., Ltd., marble; H. T. Jenkins and Sons, Ltd., marble; John Stubbs and Sons, marble; Hollis Bros. and Goddard, wood block floors; Carter & Co., tiling; Pugh Bros., mirrors; Jas. Clark and Sons, mirrors and glass. Furniture: John Daymond, Maple & Co., J. P. White, A. Edmunds, Hamptons, Ltd., Turner Lord, Samuel Elliott and Sons, Ltd., D. Bianco and Sons. Electrical fitting manufacturers: Benjamin Electric, Ediswan, General Electric Co., Ltd., Higgins and Griffiths, Ingram and Kemp, Walter Gilbert, Galsworthy, Troughton and Young, Best and Lloyd, Dernier and Hamlin, Tucker and Edgar, E. Heffer & Co., Osler and Faraday, Woodfyt Sales, Holophane, Ltd., K.F.M. Engineering.

Oakwood School, Chase Road, Southgate (page 66 and Supplement). General contractors: Messrs. Henry Knight and Son, 16, Bruce Grove, Tottenham, N. 17. Principal sub-contractors, etc.: Messrs. G. N. Haden and Sons, Ltd., Lincoln House, 60, Kingsway, W.C.2, heating and hot water installation; Messrs. T. Clarke & Co., Ltd., 129, Sloane Street, S.W.1, electrical installation; Southgate and District Gas Co., Station Road, New Southgate, N.11, gas services; Tarpaving and Tarmacadam, Ltd., 25, Oxford Street, W.1, tarpaving; Messrs. Stevens and Adams, Ltd., Victoria Works, Point Pleasant, Wandsworth, S.W., wood block flooring; Indented Bar and Concrete Engineering Co., Ltd., Vincent House, Vincent Square, S.W.1, concrete reinforcement; Crittall Manufacturing Co., Ltd., 210, High Holborn, W.C.1, metal windows; Messrs. Stirling and Johnson, Ltd., Albion House, 59A, New Oxford Street, W.C.1, roof tiling; Messrs. Henry J. Greenham, Ltd., Shepherds Bush, W.12, facing bricks; Messrs. Emerson and Norris, Ltd., Great West Road, Brentford, W., artificial copings, etc.; The Limmer and Trinidad Lake Asphalte Co., Ltd., Artillery House, Artillery Row, S.W.1, asphalting; Messrs. Kendall's Paving Co., Ltd., 70, Victoria Street, S.W.1, granolithic floors; Messrs. A. D. Dawnay and Sons, Ltd., Steelworks Road, Battersea, S.W., steelwork to roof trusses, etc. The Central Joinery Co. (1927), Ltd., Palmerston Works, 179, High Road, Kilburn, N.W.6, flush doors; Messrs. T. A. Harris, Ltd., 56, Blackfriars Road, S.E.1, sanitary fittings.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

Plans passed by CAMBERWELL B.C. : Town hall extensions, Peckham Road, for Messrs. Culpin and Bowers ; additions, "Albion" public-house, Commercial Road for Messrs. Charrington & Co., Ltd. ; six houses, Lindon Grove, for Mr. J. P. Blake.

Plans passed by the FINCHLEY U.D.C. : Four houses, Deansway, for Messrs. J. Steward and Sons ; three houses, Aylmer Road, for Messrs. Slatford Bros. ; 12 flats, Howard Walk, Hampstead Garden Suburb, for Mr. G. C. Swanson ; six houses, Brim Hill, for Mr. G. C. Swanson ; two houses, The Leys, Hampstead Garden Suburb, for Mr. G. Ramsbotham ; three houses, Derwent Crescent, for Mr. W. S. Cook ; pavilion, Brook Farm, for Finchley Boys' Club ; two houses, Tillingbourne Gardens, for Messrs. Bolton and Norris ; six houses, Wentworth Avenue, for Messrs. F. W. Bristow and Son, Ltd.

The GRAVESEND Corporation has approved plans by the borough engineer for alterations at the municipal offices, at a cost of £1,520.

The HAMMERSMITH B.C. recommends the appointment of Sir Brumwell Thomas as architect for a revised scheme for the erection of a new town hall at Brook Green, at an estimated cost of £163,500.

The Middlesex C.C. has prepared plans for remodelling and re-equipping the laundry at Warkworth House, ISLEWORTH, at a cost of £12,900.

Plans passed by the MARYLEBONE B.C. : Canopies, Cumberland Hotel, Oxford Street and Gt. Cumberland Place, for Mr. F. J. Wills ; staircases, 506–540 Oxford Street, for Sir John Burnet, Tait and Lorne ; subway for John Lewis & Co., Holles Street, for Messrs. Slater and Moberley ; flats, Abbey Road and Grove End Road, for Mr. J. Mactaggart ; flats, Gt. Chesterfield Street and New Chesterfield Street, for Messrs. G. Head & Co. ; two houses, Grove End Road, for Mr. R. Atkinson.

The MIDDLESEX C.C. recommends the sale of Edmonton Latymer Foundation land, in Hammersmith Road, to a syndicate which is to erect 34 lock-up shops, and 354 flats. The scheme will cost £325,000.

The MIDDLESEX C.C. recommends a contribution of £55,000 to the trustees, for the renovation, at a cost of £132,000, of Alexandra Palace and Park.

The Middlesex C.C. Health Committee recommends obtaining tenders for the erection of pavilions, villas, administrative buildings, etc., at the SHENLEY mental colony, at an estimated cost of £103,535.

Plans passed at TOTTENHAM U.D.C. : Store and repair shop, rear 407 Lordship Lane, for Mr. R. V. Langbart ; factory, West Road, for Mr. E. G. Brown ; shops, High Road, for Messrs. Marks and Spencer, Ltd. ; three flats, Hermitage Road, for Mrs. H. Lucas ; two houses, Vartry Road, for Mr. A. Grossman ; factory, Willoughby Lane, for Raven Confectionery, Ltd. ; shops, The Green, Tynemouth Road, for Messrs. Brooking Bros. ; 91 houses, Devonshire Hill Estate, for Messrs. G. Reed and Sons, Ltd.

The WANDSWORTH B.C. is to erect flats at North Street, Clapham, at a cost of £14,580, reconstruct the Cumbers Yard area, at a cost of £28,786, and erect blocks of flats at Magdalen Road, at a cost of £144,000.

The WIMBLEDON Corporation has approved amended plans submitted by Messrs. Harold Bailey, Dudley and Farrier, for the erection of 56 flats in Spencer Road.

SOUTHERN COUNTIES

Plans passed by the BEXHILL Corporation : 16 houses, St. John's Road and elsewhere, for Mr. J. E. Maynard ; eight houses, Ninfield Road, for Mr. R. W. Moore ; estate development, Broadoak Lane, for Messrs. Oxley and Burleigh ; additions to Golf Club, Brookfield Road, for Mr. C. L. Macnamara ; two houses, Springfield Road, for Mr. T. E. Skinner ; four houses, Southlands Avenue, for Mr. E. Bunce ; three houses, The Gorses, for Messrs. Tubbs and Messer.

Plans passed at BOURNEMOUTH : Additions to shop, 987 Wimborne Road, for Mr. A. Cave ; 72 bungalows, Daws Avenue, for Mr. J. H. Schofield ; alterations and additions, 14–16 Southbourne Grove, for The International Tea Co., Ltd. ; alterations, premises in St. Peter's Road, for Messrs. J. J. Allen, Ltd. ; alterations and additions, 63 and 65 Kimberley Road, for Mr. G. Marlow ; alterations and additions, Courtlands Hotel, Owls Road, for Mr. W. H. Letley ; tank house, Malmesbury Road milk depot, for the P. and B. Co-operative Society ; two houses, Leeson Road, for Messrs. Chitty and Hudspith ; alterations and additions, East Cliff Congregational Church, Holdenhurst Road, for the Deacons ; two houses, Riverside Road, for Mr. G. B. Ive ; two houses, Bradpole Road, for Mr. M. E. Lee ; club, Ringwood Road, for Mr. J. White ; four bungalows, Hillview Road, for Mr. F. E. Etches ; conversion into flats, 46 Stourfield Road, for Mr. C. W. Garrett ; two bungalows, Denmead Road, for Mr. S. E. Jones ; church hall, Ropley Road, for the Deacons of Richmond Hill Congregational Church ; two houses, Corhampton Road, for Mr. F. Holt ; two houses, Littledown Avenue, for Mr. A. Wright ; shops, hotel and flats, Westover Road, for The Palace Hotel Co. ; two bungalows, Ilford Lane, for Messrs. Bannings, Ltd. ; two houses, Beaufort Road, for Mr. S. Adams ; six flats, Michelgrove Road, for Mr. W. E. McArdle.

Plans passed by FARNHAM U.D.C. : Three houses, Waverley Lane, for Mr. R. W. Hards ; two houses, Rowhills estate, for Mr. R. E. Symonds ; two houses, Beavers Hill, for Mr. E. Johnson ; house, Broonleaf estate, for Mr. E. W. L. Brownjohn ; cottage off Crondall Lane, for Mr. R. J. Ramm ; house, Lynch Road, for Mr. H. S. Burningham ; house, Shortheath Road, for Mr. I. J. Gerard ; bungalow, Upper Hale, for Mr. P. Margary.

Plans passed by NEWPORT (I. o. W.) Corporation : Offices and workshops, Westfield, for Mr. Frank Chiverton, architect, on behalf of Southern Vectis Bus Co., Ltd. ; two bungalows, Staplers, for Messrs. Quintons ; house, Medina Avenue, for Mr. J. G. Brooker ; house, Whitepit Lane, for Messrs. Stratton and Millgate ; house, Staplers, for Mr. M. R. Fletcher, architect of Worthing ; two houses, Whitepit Lane, for Mr. C. Railey.

SOUTH-WESTERN COUNTIES

Plans passed at PLYMOUTH : Two houses, Brean Down Road, for Mr. A. Manning ; eight houses, Cemetery Road, for Messrs. Griffiths, Hawke & Co. ; two houses, Cemetery Road, for Mr. G. Holmes ; two houses, Cranmere Road, Higher Compton, for Messrs. J. Davy and Son ; two houses, Vapron Road, Mannamead, for Messrs. Oldrey and Yeo ; alterations and additions, 8 and 8a, Chapel Street, Devonport, for Mr. C. F. Hocking ; alterations, 4, High Street, for Mr. W. Pitts ; additional story to tenement, 36, Limetree Road, for Mr. W. Lamb ; alterations and additions to offices, 4, Tavistock Road, for Mr. J. Hearn ; workshop, Cattedown, for Anglo-American Oil Co. ; three new streets, Pounds Estate, for Mr. E. A. Davy ; alterations and additions, rear, 31, King Street, for Mr. M. Sanger ; new headquarters, Diamond Avenue, for the trustees of 5th Plymouth Group Boy Scouts ; offices, Towers Estate, Hartley, for Messrs. Pearn Bros. ; lay-out of Swilly Vale, for St. Aubyn Estates ; three streets, Western Park estate, for Mr. E. A. Davy ; two houses, Break Down Road, for Mr. A. Manning.

Plans passed at TORQUAY : Lay-out for 33 sites and new road, near Herbert Road, for Messrs. Midgeley and Hardy ; bungalow, Nut Bush Lane, for Mr. A. E. Guest ; additions, Upton Post Office, Lymington Road, for Mr. H. A. Pauley ; house, Ilsham Manor Estate, for Mr. L. H. Collier ; two houses, Shiphay Lane, for Mr. J. F. Maule ; bungalow, Marldon Road, for Mr. T. H. Lount ; addition to shop, 36, Princes Road, Ellacombe, for Mr. W. Downey ; two houses, Manscombe Road, Livermead, for Mr. R. H. Ward ; additions, 17, Fleet Street, for The Regent Fur House ; bungalow, Seaway Lane, for Mr. J. T. Hanbury ; bungalow, Cadewell Lane, for Mr. C. B. Powell; four houses, Cedar Court Estate, for Messrs. H. Lloyd and Son.

MIDLAND COUNTIES

Plans passed by WOLVERHAMPTON Corporation : Shop, Bushbury Lane, for Mr. Edwin Ellis ; 23 houses, Pinfold Lane, for Mr. W. Winsper ; six houses, Bee Lane, for Mr. W. H. S. Morris ; house, Burnham Avenue, for Mr. J. J. Towers ; house, Rowan Crescent, for Mr. G. E. Lockley ; two houses, Warstones Road, for Messrs. W. and A. Dalton ; gymnasium extensions, St. Chad's College, Old Fallings Lane, for Messrs. Sandy and Norris ; two houses, York Gardens, for Mr. J. H. Appleby ; alterations and additions, Corn Hill, for Messrs. J. N. Milner & Co. ; six cottages, off Goldthorn Hill, for Mr. F. H. Minty ; 20 houses, Cannock Road, for Mr. M. A. Boswell ; ten houses, Holly Bush Lane, for Mr. C. B. Jones ; alterations, Criterion Hotel, Princes Square, for Licensed Properties, Ltd ; house, Richmond Avenue, for Mr. H. Turner ; house, Green Lane, for Mr. W. H. Munslow ; house, St. Jude's Road, for Mr. W. Wilford ; three houses, Wynn Road, for Messrs. Pidgeon Bros., Ltd. ; two houses, Rupert Street, for Mr. E. Victor Russell ; house, Goldthorn Road, for Mr. N. H. Kidson ; house, Willenhall Road, for Mr. W. Brown ; six houses, Rowan Crescent, for Messrs. Blackburn and Crossland ; 58 houses, Marston Road, for Mr. A. J. Jesson ; 282 houses, Elston Hall estate, for Mr. A. J. Fieldhouse ; 30 houses off Warstones Road, for Messrs. A. M. Griffiths and Son, Ltd. ; two houses, Plascom Road, for Mr. W. H. Smith ; shops and warehouses, Victoria Street, for Messrs. Nicol and Thomas ; five houses, Dixon Street, for Mr. J. Harris ; development, Berrington Lodge estate, and 44 houses, Finchfield Farm estate, for Messrs. Annan and Jones ; shop, Five Ways, for Mr. Wm. E. Dunn ; 43 houses, Marston Road, for Messrs. Matston, Fellows, Ltd. ; extensions, switch drawing offices, Bushbury, for Electric Construction Co.

NORTHERN COUNTIES

Plans passed by the BOLTON Corporation : Estate lay-out, Barrow Bridge Road, for Messrs. George and Beddows ; two houses, Elgon Street, and 12 houses, Shepherd Cross Street, for Mr. William Gornall ; 16 houses, Moss Lane, for Mr. A. S. Woods ; dairy, Clough Farm, Chorley New Road, for Lady Beaumont ; two houses, Smithills Dean Road, for Messrs. R. G. Hirst and Son ; four houses, Albert Road, for Messrs. G. H. Pearse and Son ; 18 houses, Chorley Old Road, for Messrs. A. T. Reynolds & Co. ; alterations, Sunday School, Eden Street, for Baptist trustees ; 10 houses, off Thornes Road, for Mr. W. E. Yates ; two houses, Moss Lea, for Mr. William Holt.

Plans passed by STOCKTON-ON-TEES Corporation : 24 houses off Hallisfield Street, Norton, for Messrs. Lane and Fox ; two houses, Hartburn Avenue, for Messrs. R. Johnson and Son ; development, Garden Estate, Hartburn, for Messrs. Wm. Cowan and Son, Ltd. ; two houses, Hartburn Avenue, for Mr. George Hope ; two houses, Hartburn Avenue, for Mr. G. Crosby, architect ; two houses, Grosvenor Road, for Mr. Chas. J. Boyd ; estate development and 64 houses off Mowbray Road, for Mr. G. P. Stainsby, architect ; canopy and alterations, Hippodrome, Dovecot Street, for Messrs. Chadwick and Watson & Co., architects, 9 Albion Street, Leeds ; estate development, The Avenue, Fairfield, for Mr. T. W. T. Richardson, architect ; development, Highfield estate, Greens Lane, Hartburn, for Mr. R. B. Bainbridge ; shop, Darlington Road, for Mr. H. Outhwaite ; two houses, Bridge Road, for Messrs. Heslop and Hornsby ; 12 houses, Westerleigh Avenue, for Mr. Harry Porteous ; 16 houses, Whitfield Avenue, for Mr. T. E. F. Whitear.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	ABERDARE	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	BANBURY	S. Counties	1 3	11½
B_1	Bangor	N.W. Counties	1 3	11½
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11½
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11½
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5	1 0¾
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A	Cumberland	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11½
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11½
A	HALIFAX	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	JARROW	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	LANCASTER	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W. Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11½
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	PAISLEY	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	TAMWORTH	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1 1¼
A	Tyne District	N. E. Coast	1 5½	1 1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11½
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	YARMOUTH	E. Counties	1 3	11½
B_1	Yeovil	S.W. Counties	1 3	11½
A	York	Yorkshire	1 5½	1 1¼

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* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
Thames Ballast	per Y.C.		6	9
⅝" Crushed Ballast	,,		7	6
Building Sand	,,		7	9
Washed Sand	,,		8	9
2" Broken Brick	,,		8	3
⅝" ,, ,,	,,		11	6
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,		0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	9	2	6
,, Wirecuts	,,	8	2	6
,, Brindles	,,	7	6	6
,, Bullnose	,,	9	14	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	8	8	0
Luton Facings	,,	8	0	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	26	0	0
,, green	,, ,,	27	15	0
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		19	0
,, ⅞"	,,	1	1	6
,, 1"	,,	1	3	6
,, 1¼"	,,	1	7	6
,, 1½"	,,	1	12	0
Deal matchings ⅝"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1½"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/-	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		¼"	½"	1"	1¼"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ⅜"	,,	8	6
,, ,, ½"	,,	8	3
,, ,, ⅝"	,,	8	0
,, ,, ¾"	,,	7	6
,, ,, ⅞"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	,,	5	0	8	6
Boots	,,	3	3	4	5
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	2	0
,, drawn pipes	,,		19	0
,, soil pipe	,,	1	6	0
,, scrap	,,		14	6
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			10½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3"		4"		6"	
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2⅝
,, ,, 26 oz. ,, ,, ,,	,,					3⅜
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
⅛" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	1
Boiled oil	,,		2	3
Turpentine	,,		4	9
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
„ to reduce levels n/e 5′ 0" deep and cart away	Y.C.		8	6
„ to form basement n/e 5′ 0" deep and cart away	„		9	0
„ „ 10′ 0" deep and cart away	„		9	6
„ „ 15′ 0" deep and cart away	„		10	0
If in stiff clay add	„		2	6
If in underpinning „	„		4	0
Digging, return, fill and ram „	„		4	0
Planking and strutting to sides of excavation	F.S.		1	0
„ „ to pier holes	„			5
„ „ to trenches	„			5
„ „ extra, only if left in	„			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	„	1	6	0
„ „ „ (4-2-1)	„	1	12	6
„ „ „ underpinning	„	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and gratings	„	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
„ „ in cement	„	29	15	0
„ Stocks in cement	„	35	15	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			5½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	„	6	9
¾" paving or flat	„	4	0
1" paving or flat	„	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	„	3	7	0
Do., 24" × 12"	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles	„	2	16	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" „ „ „ „	„	1	17	6
1¼" „ „ „ „	„	2	3	0
¾" × 2" fir battening for Countess slating	„		9	6
Do. for 4" gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1½" „ „ „ „ „	„		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	„	2	12	6
1½" do.	„	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1¼" do.	„		1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" „ „	„	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ½" parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	3	9
2" „ „ „	„	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" „ „ „	„	2	8
1½" „ but moulded both sides	„	2	4
2" „ „ „	„	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" „ „	„	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½" deal moulded wall strings	„	2	1
1½" „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" „ „	„	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	16	6
Do. in flashings		1	19	0
Do. in covering to turrets, etc.	„	2	6	0
Do. in soakers	„	1	12	0
Labour to welted edge	F.R.			3½
Open copper nailing	„			3½
Close „ „	„			4½

		½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1¼" s.	1¼" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks	F.R.	1	0	1	2	1	5	2	1	3	0	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	3
Do. to stop ends	„		6½		8		9		11	1	3	—	
Boiler screws and unions	„	3	3	3	9	5	0	8	0	—		—	
Lead traps	„	—		—		—		6	3	8	9	—	
Screw down bib valves	„	6	9	9	6	11	0	—		—		—	
Do. stop cocks	„	9	0	11	0	14	6	20	6	47	0	—	

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	9
Do. vertical	„		2	3
Rough render on walls	„		1	4
Render, float and set in lime and hair	„		2	0
Render and set in Sirapite	„		2	2
Render, backing in cement and sand, and set in Keene's cement	„		3	1
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R.			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1" girth	„			1½
1" granolithic pavings	Y.S.		3	6
1½" „	„		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	„		17	6
9" × 3" „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

PAINTER

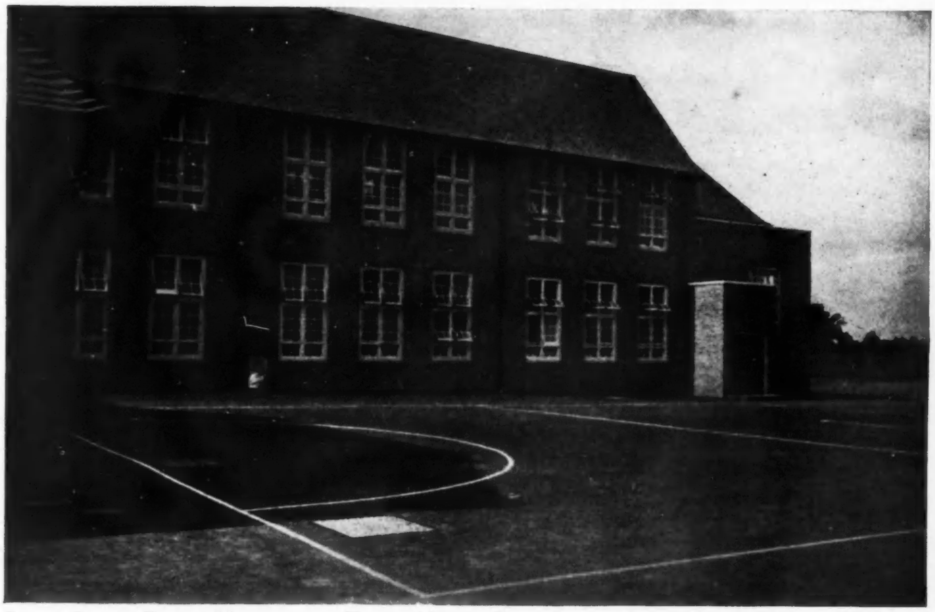
		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper from	„	2	9

Indexed

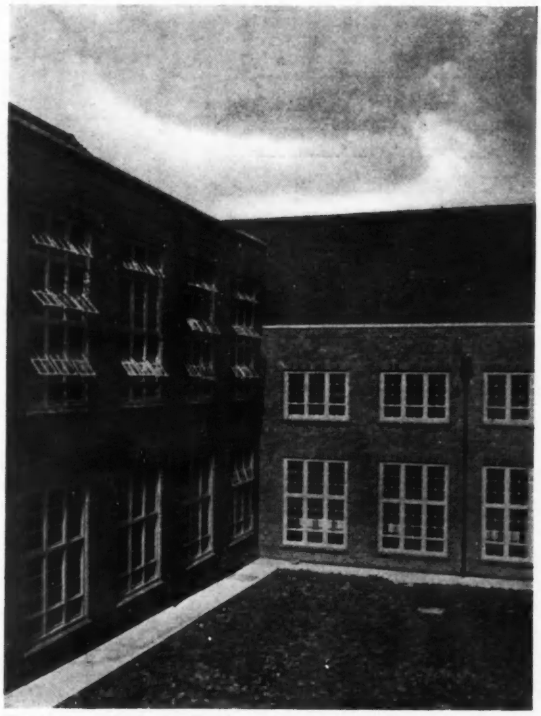
Supplement to THE ARCHITECTS' JOURNAL for July 20, 1933

OAKWOOD SCHOOL, SOUTHGATE

DESIGNED BY : : W. T. CURTIS



FROM THE SOUTH



THE SOUTH QUADRANGLE

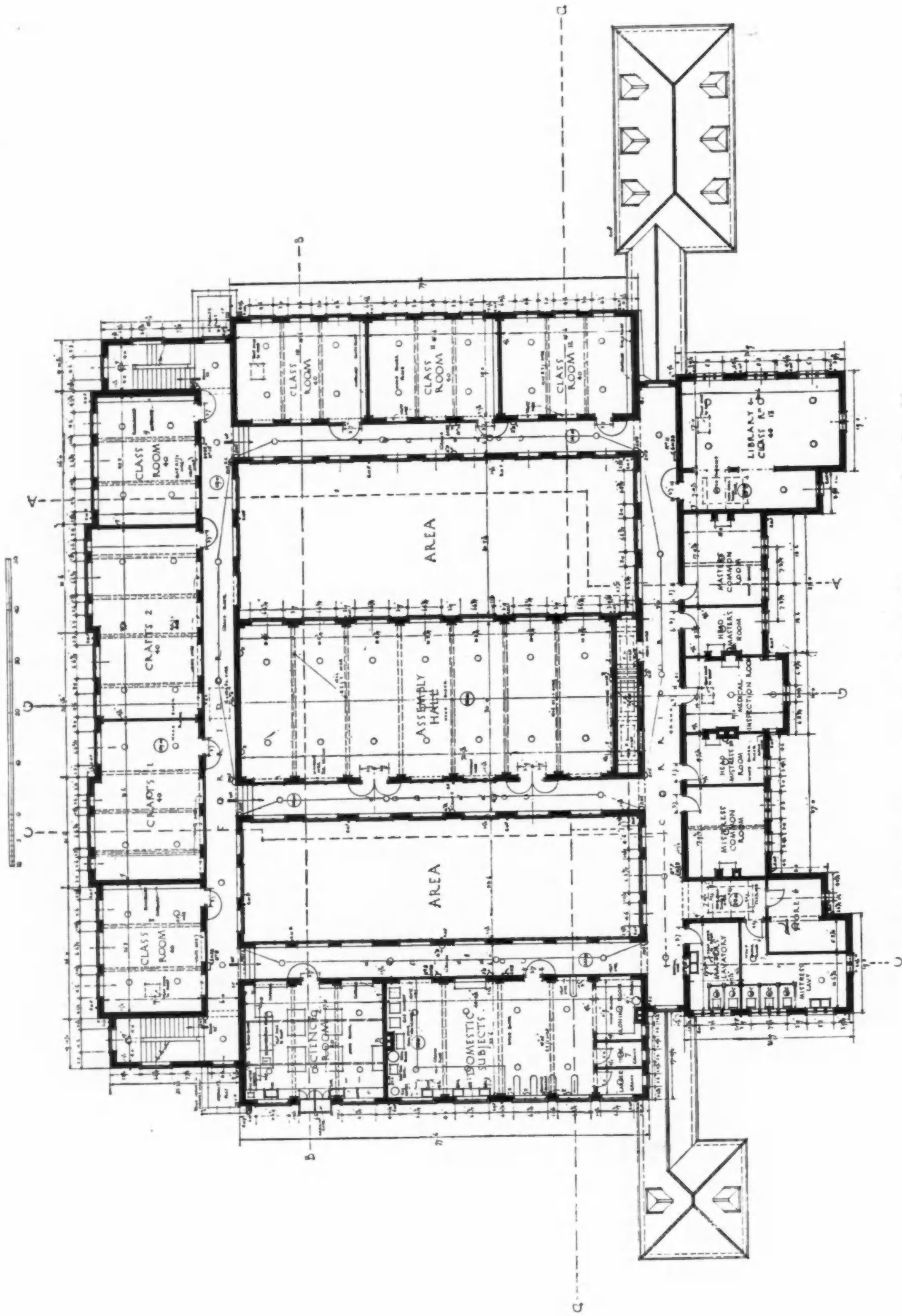
THE School is built on a site of about 7 acres in Chase Road, Southgate, and provides accommodation for 740 children (400 seniors and 340 juniors and infants).

The building is finished externally with grey-brown facing bricks and roofed with red sand-faced tiles. The general finish of walls internally is in fair-face brickwork; staff rooms, etc., are plastered. Floors of classrooms, staff rooms, Assembly Halls, etc., are of pitch pine wood blocks, while corridors and cloakrooms are paved in granolithic.

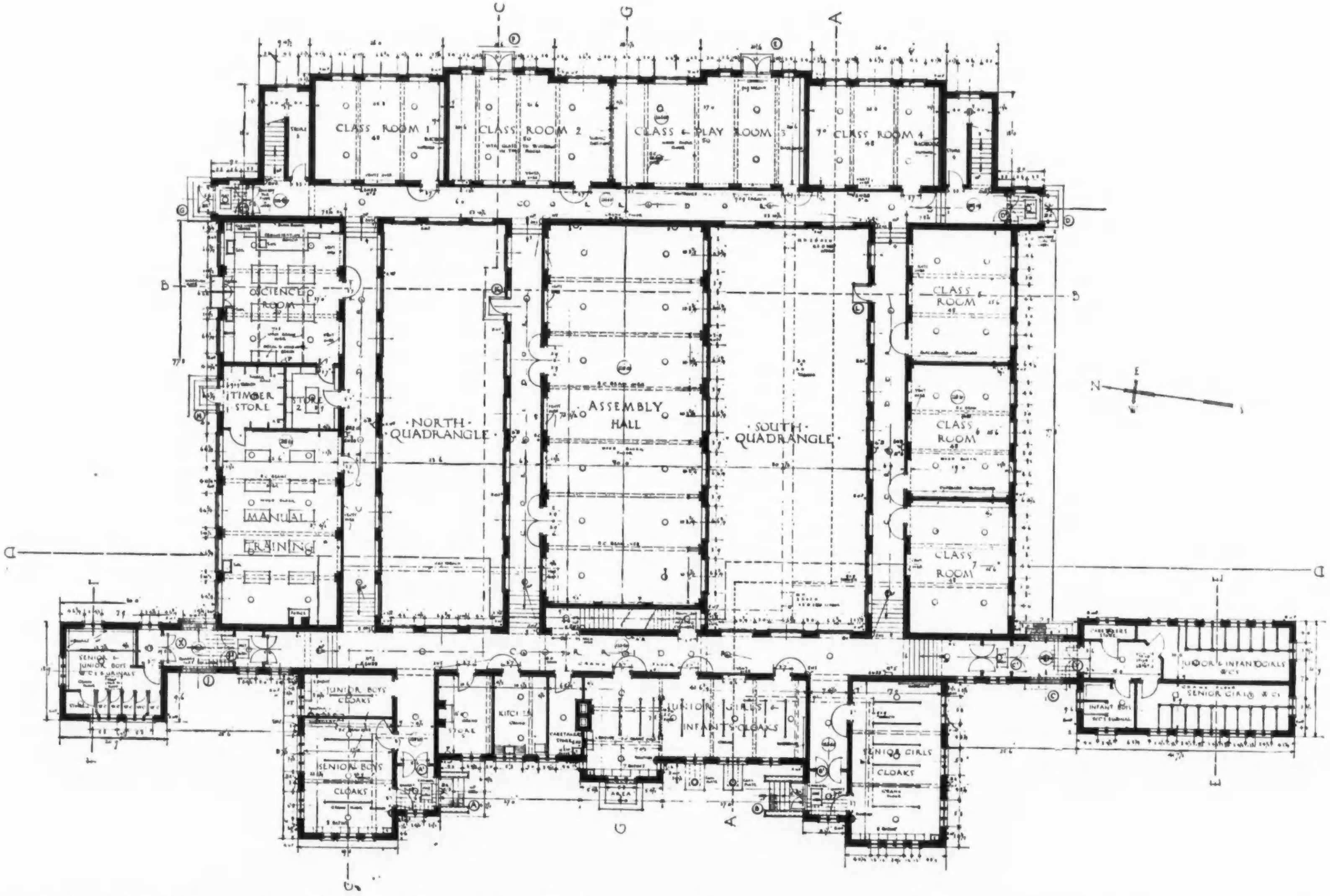
All upper floors and staircases are of reinforced concrete, and the building throughout is of fire-resisting construction.

In all the classrooms, cupboards are fitted into recesses under the blackboards, in order to obtain the maximum floor space. Classroom furniture, generally, is of oak.

Other pictures of the School appear on the frontispiece of this issue.


CLASS ROOM
CLASS ROOM
CLASS ROOM
CLASS ROOM
CRAFTS 2
CRAFTS 1
CLASS ROOM
AREA
ASSEMBLY HALL
AREA
SCIENCE ROOM
DOMESTIC SUBJECTS
CORRIDOR
LIBRARY & CLASS R.
MASTERS COMMON ROOM
HEAD MASTER'S ROOM
MEDICAL INSPECTION ROOM
HEAD MISTRESS ROOM
MISTRESSES COMMON ROOM
STORE
LAVATORY
A
A
B
B
C
C
D
D

FIRST FLOOR PLAN


CLASS ROOM 1
CLASS ROOM 2
CLASS & PLAY ROOM 3
CLASS ROOM 4
SCIENCE ROOM
TIMBER STORE
STORE
MANUAL TRAINING
NORTH QUADRANGLE
ASSEMBLY HALL
SOUTH QUADRANGLE
CLASS ROOM
CLASS ROOM
CLASS ROOM
N
S
E
W
SENIOR & JUNIOR BOYS W.C.S & URINALS
JUNIOR BOYS CLOAKS
SENIOR BOYS CLOAKS
STORE
KITCHEN
CARETAKERS STORE
JUNIOR GIRLS & INFANTS CLOAKS
AREA
SENIOR GIRLS CLOAKS
CARETAKERS STORE
JUNIOR & INFANT GIRLS W.C.S
SENIOR GIRLS W.C.S
INFANT BOYS W.C.S & URINAL
A
A
B
B
C
C
D
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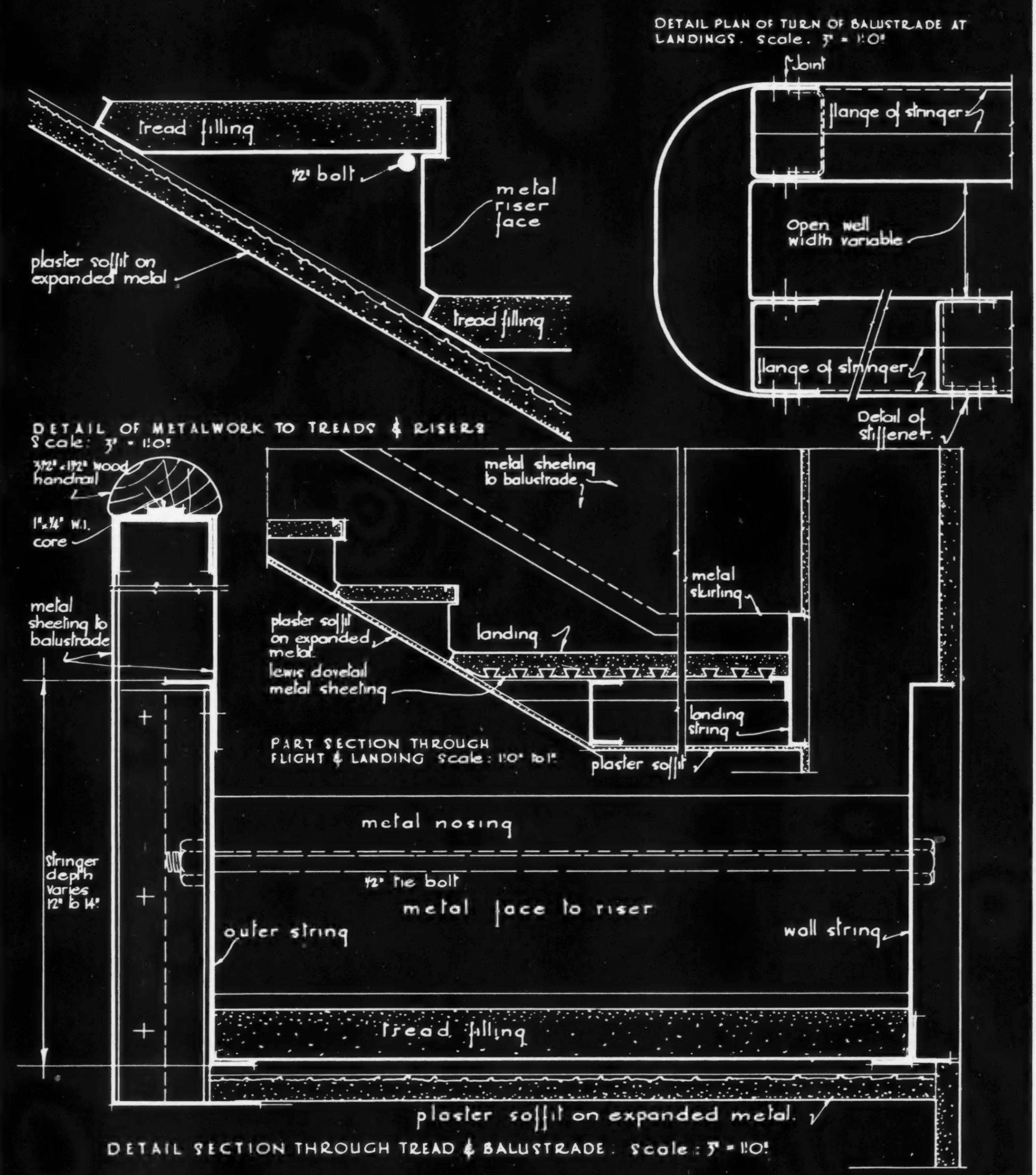
G
G

OAKWOOD SCHOOL, SOUTHGATE. GROUND FLOOR PLAN


DETAIL PLAN OF TURN OF BALUSTRADE AT LANDINGS. Scale. 3" = 1'.0"
joint
flange of stringer
open well width variable
flange of stringer
Detail of stiffener
tread filling
½" bolt
metal riser face
plaster soffit on expanded metal
tread filling
DETAIL OF METALWORK TO TREADS & RISERS Scale: 3" = 1'.0"
3½" × 1½" wood handrail
1" × ¼" W.I. core
metal sheeting to balustrade
metal sheeting to balustrade
metal skirting
plaster soffit on expanded metal
landing
lewis dovetail metal sheeting
landing string
PART SECTION THROUGH FLIGHT & LANDING Scale: 1'.0" to 1"
plaster soffit
stringer depth varies 12" to 14"
metal nosing
½" tie bolt
metal face to riser
outer string
wall string
tread filling
plaster soffit on expanded metal.
DETAIL SECTION THROUGH TREAD & BALUSTRADE. Scale: 3" = 1'.0"

from F. Braby & Co Ltd.

DETAILS OF INTERLOCKING PRESSED STEEL STAIR CONSTRUCTION.

SIR JOHN BURNET, TAIT, AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

• 26 •

PRESSED STEEL STAIRS: 2

•

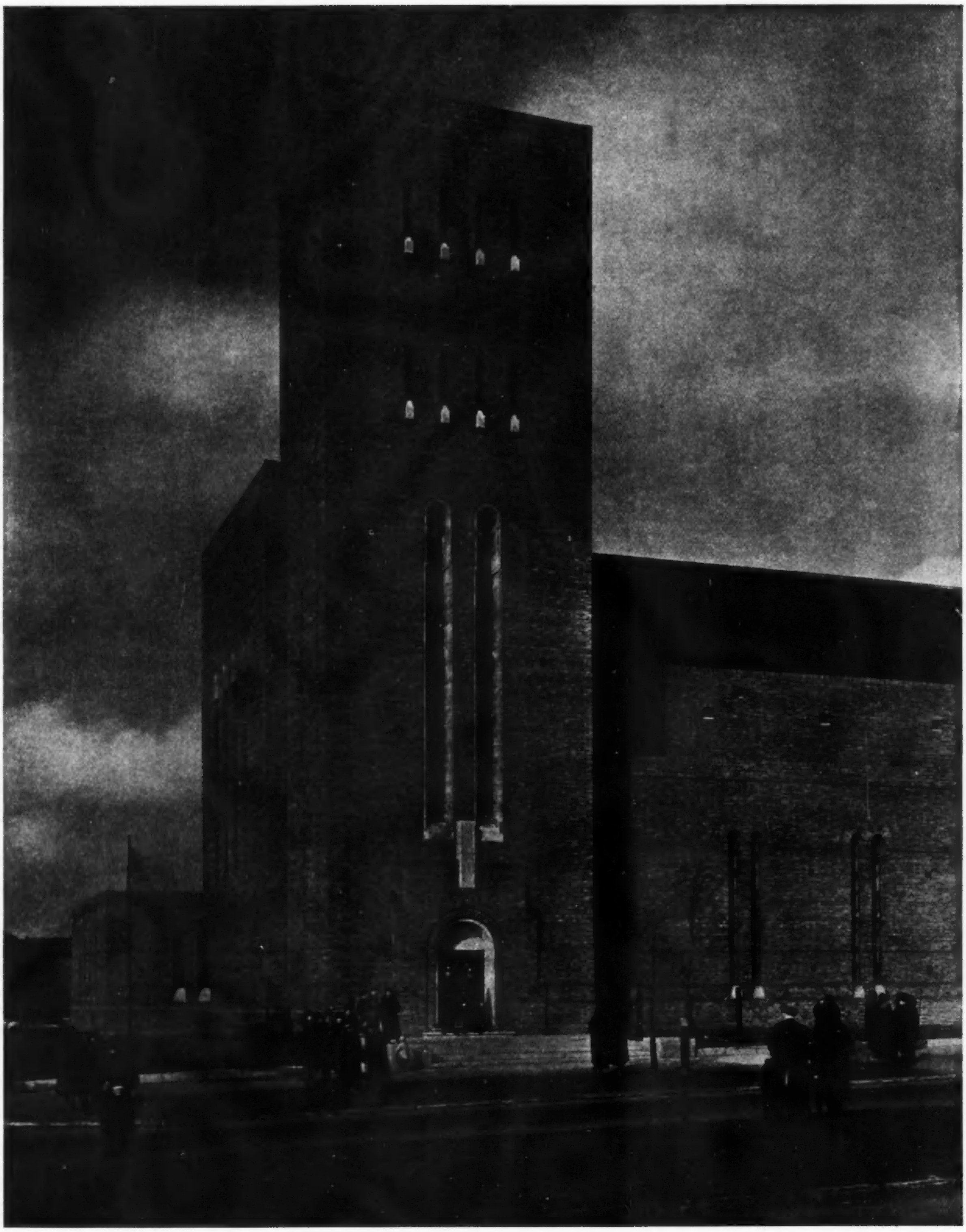
THIS week's Information Sheet is the ninth, and last, of the Sheets devoted to staircases. Next week will be published the first of several Sheets giving the common sizes of office furniture.

The following is a full list of the subjects previously issued:—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units.
13. Apr. 12—Lavatory Units.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes.
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs: 1.
23. June 29—Concrete Stairs: 2.
24. July 6—Pressed Steel Stairs: 1.
25. July 13—Floor Loads, etc.

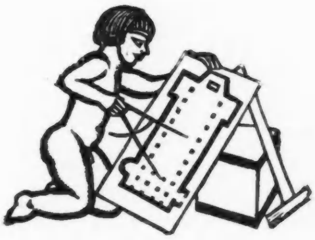
P.Inst.R.A.

SIR EDWIN L. LUTYENS, R.A., P.Inst.R.A., P.I.A.A.S., whose new Institute—The Institute of Registered Architects—is discussed in this week's leading article.



THE NEW CHURCH OF ST. GABRIEL, BLACKBURN

This church, designed by F. X. Velarde, is in the centre of a modern working-class suburb on the outskirts of Blackburn. It is faced with narrow orange Stamfordstone bricks with a wide joint, and roofed with heavy tiles almost black in colour. The architect had the advice of B. A. Miller and Professor Reilly as consultants. The cost was £15,000.



M.INST.R.A.

THE INSTITUTE OF REGISTERED ARCHITECTS

A NEW national architectural society has been established under the title of The Institute of Registered Architects. It is to be "composed wholly of Registered architects and devoted solely to their interests."

Sir Edwin Lutyens, R.A., is the President, and the Foundation Council consists of the following Registered architects :—

Sir Edwin Lutyens, the President,
Sir Robert Tasker,
Vincent Burr,
Andrew Mather,
Major F. G. Sainsbury,
A. E. Mander,
J. E. Swindlehurst,
H. F. V. Newsome,
F. W. Finchett,
J. L'estrange Mackie,
W. T. Bowman,
Major G. B. J. Athoe,
W. S. Willis.

Four of the Council, Messrs. Andrew Mather, A. E. Mander, F. W. Finchett, and Major Sainsbury, are Licentiates of the R.I.B.A. Sir Robert Tasker, Major Sainsbury and Major Athoe are members of the Architects' Registration Council, and Messrs. Vincent Burr and Andrew Mather are members of the Admissions Committee of the Registration Council. Messrs. Swindlehurst, Newsome, Bowman, Willis and Mackie are Fellows or Associates of the I.A.A.S. The acting secretary at the moment is Major Athoe, the Secretary of the Incorporated Association of Architects and Surveyors. The temporary offices are at 1 Wilbraham Place, S.W., the headquarters of the I.A.A.S.

The new Institute has no connection whatever with the R.I.B.A., the I.A.A.S., or any other architectural society. It has been formed as an organization *complementary* to these societies, and will have its own offices, officials, bankers and accountants. The Foundation Council, however, is inviting other architectural bodies, including the R.I.B.A. and the Architects' Registration Council, to co-operate with and assist the new Institute.

Why has it been necessary to form a new society at all ?

Before the advisability or otherwise of this action is discussed it is necessary to discover in what way the aims of the new Institute, as set forth in Sir Edwin Lutyens's letter, published on page 109, differs from those of the R.I.B.A. or the other architectural societies. We have therefore taken steps to find out from the organizers what their aims and constitution are ; and the facts in this article are based on information supplied by them. For the moment we neither support nor criticize.

The promoters contend that before the establishment of the new Institute there was no organization which could protect solely the interests of the Registered architect, every other society having a membership composed of Registered and non-Registered architects and thus being divided within itself.

Again, many architects obtaining registration are members of *no* architectural organization, and in the cause of economy are content merely to pay the fee of 6s. 8d. to become Registered architects, instead of incurring the expense of becoming a Chartered architect or an Incorporated architect.

A large proportion of the profession views with great uneasiness the ever-increasing number of Registered architects who are members of no architectural society : Registered architects bound by no professional code of practice or scale of fees ; Registered architects who can advertise individually in the Press, like a departmental store—architects whose names, according to Clause 7 of the Registration Act, can only be removed from the Register after they have been *convicted of criminal offence* or have been "*guilty of conduct disgraceful to him in his capacity as an architect*."

Another great cause for anxiety is Clause 17 :—

> "Nothing in this Act shall prevent a body corporate, firm or partnership from carrying on business under the style or title of Registered Architect :
>
> "(a) if the business of the body corporate, firm or partnership so far as it relates to architecture is under the control and management of a superintendent who is a registered person and who does not at the same time act in a similar capacity for any other body corporate, firm or partnership ; and
>
> "(b) if in every premises where such business as aforesaid is carried on and is not personally conducted by the superintendent such business is *bona fide* conducted under the direction of the superintendent by an assistant who is a registered person."

In short, this clause permits any firm to *use* the term Registered architects by merely *employing* a Registered architect.

The new Institute has been established to remove these dangers from the profession, to consolidate the position of the Registered architect, to amend the Registration Act, to obtain work for architects by collective advertising, and to make the title Registered architect, and the value of this title, known and respected.

"The need for an organization complementary to the various architectural societies and focussing the aims of the Registered architect is thus apparent." This is the excuse of the promoters for establishing the new society.

The Architects' Journal
9 Queen Anne's Gate
Westminster, S.W.1
Telephone: Victoria
6 9 3 6
Telegrams:
Buildable
Parl.
London

NOTES & TOPICS

THE DICTATORS OF DESIGN

SHOPPING weeks are happening all over the country. They are usually dull without any of the proper Fair spirit, and provide an opportunity for local printers to show their ineptitude and for local shopkeepers to apply tinsel trimmings to their wares.

*

Whether they are organized by municipal enterprise, or by the energy of a few shopkeepers, these occasions seldom escape shoddiness. They illustrate the belief that exists throughout England in the trading community that to attract the public you must *apply* something to what exists: flags, banners, paper streamers, and whatnot.

*

I once asked a draper in a small town why he didn't design his window displays. Perhaps I confused him, but I couldn't succeed in explaining what I meant, so I sent him some photographs of some really attractive window displays later.

*

He returned them with this comment: "People would think I had not got any stock if I did my windows like this."

*

That man, and hundreds like him, will make the outside of his shop dismal with badly printed bills and paper rubbish in order to take part in a shopping week. But he is afraid to try anything new in window dressing, and, as many manufacturers, who have to sell their goods to the public through such shops, have told me, he resents any attempt to improve the design of display material or the goods themselves.

*

Like the ignorant savage farmers of the Middle West who act as a brake upon all that is enlightened and progressive in American policy, the little narrow shopkeepers of England slow up every attempt to improve the design not only of the things they sell, but of everything else.

*

Their little shops are often rubbish heaps. But they are proud of their stupidity. Their resentment of change encourages those mockeries of traditional design in building that everywhere deface our towns and villages. They are the real rulers of England.

*

L.C.C.

The L.C.C. are embarking on an extended slum-clearance scheme involving the spending of £35,000,000 over a period of ten years. I have still to discover to what extent this programme is going to produce *cheap* dwellings for the lowest-paid workers, and a new way of life for the poor of London.

*

Is it going to be piecemeal as before or will it help to rebuild London on a newer, more generous pattern? The L.C.C. have a slum survey. Will they fit this into a general survey so that slum clearance will be part of a re-created plan of London?

LONDON'S CHEAPEST FLATS

There are now practically completed four blocks of Mr. Topham Forrest's flats on the Honor Oak estate at Brockley. The first block, near to the railway, contains a number of flats with two or three rooms. In this block a wash-house with a bath and copper is common to three flats.

*

The remaining three blocks consist of flats with two, three and four rooms, and in each a separate bath, a deep sink and a copper.

*

The communal bathroom contains a sink, a table, a seat, a copper, and a good-sized bath. It is said that tenants may prefer this type, not only because it is less in rent, but because there are advantages in washing in a room that is separated from the flat, since the steam from washing doesn't enter the living room or bedroom.

*

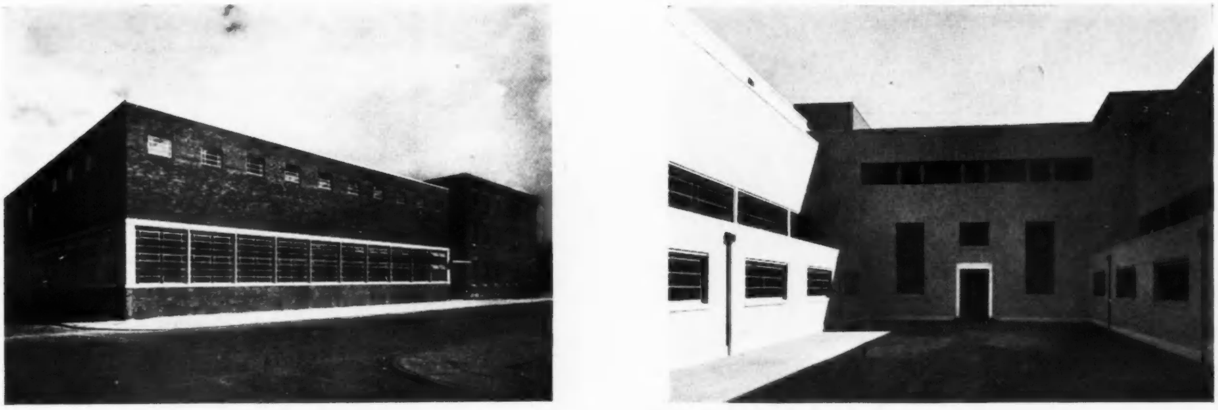
The average cost per room works out to about £111, and the rents will vary according to the type, the number of rooms, and the position, from 4s. 9d. to over 12s. Flats at these rents will be the cheapest yet provided in London for the rehousing of people who are at present living in overcrowded conditions.

STILL PAYING 6½ PER CENT.

An effort is being made by various Public Utility Societies to persuade the Government to reduce the rates of interest now being charged. These societies were specially encouraged by Dr. Addison under the 1919 Act, and numerous new societies were formed to carry out "approved schemes." But there was an inevitable rapid rise in building costs, owing to contracts being placed far in excess of the capacity of the Building Industry.

*

At the same time the cost of money increased, and the



The new Leverhulme Building, Liverpool University School of Architecture, designed by C. H. Reilly, L. B. Budden and J. E. Marshall. The photograph on the left shows the Bedford Street front, and that on the right the central court. The buildings are described on this page and in the News on page 102.

rate of interest charged by the Public Works Loan Commissioners rose to 6½ per cent. Today many Societies owning admirably laid-out Garden Villages are paying 6½ per cent. to the Government on thousands of pounds.

*

On many of these estates there are empty houses, either because the tenants can no longer afford to live in a separate house and are crowding in with relatives, or else because they require garages and more modern houses. It is a pathetic sight to see good dwellings standing empty, and councils losing rates.

*

It is little wonder that a number of these Societies are already bankrupt. Others are today passing through a most anxious and critical period. This is most unfortunate, as at one time the system of self-help and co-operation in housing had bright prospects.

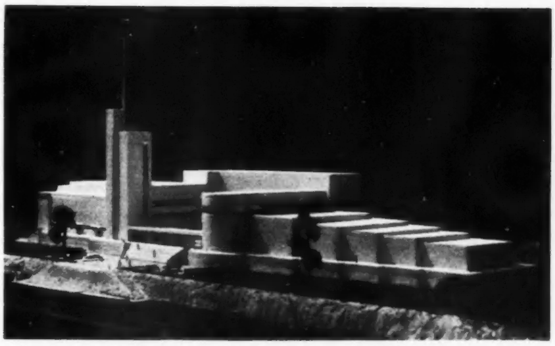
*

THE LIVERPOOL SCHOOL

The Liverpool School has burned its boats behind it.

*

The new school in dignified Abercrombie Square, so far as studios and lecture halls are concerned, is designed for its job without any concessions to Alma Mater or the dear old tradition of copying from the past; while the old houses fronting on to the square have been incorporated into the general scheme by an extension of that brave manipulation of the theory of applied colour which makes the new buildings gay enough to make one forget grimy Liverpool for a space.



A Broadcasting Station for Wales at Cardiff. This model, of the Thesis design of A. Douglas Jones, is on view in the Exhibition of the Work of Past and Present Students at the new Leverhulme Building of the Liverpool University School of Architecture.

*

The exhibition of photographs of work by old students recalls the amazingly high standard of the *Book of the Liverpool School* which commemorated Professor Reilly's twenty-fifth year as director. What a grand record he has left! Not only in Liverpool, whose fine housing and commercial architecture is a direct reflection of his work, but in towns and cities all over the world.

*

SIR HERBERT BAKER

Sir Herbert Baker is preparing plans for the new Church House to be erected in Dean's Yard. The present building was started in 1887 on the initiative of Harvey Goodwin, the Bishop of Carlisle, but could not be completed owing to the fact that the houses in Dean's Yard were let on long leases, which are only now falling in.

*

I am told that under Sir Herbert Baker's scheme the south-east gateway of Dean's Yard, which was designed by Sir Gilbert Scott, will probably be demolished. Great care is being taken by Sir Herbert to harmonize the elevations of this new building with the character of Dean's Yard,

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, July 27

Painters' Hall, Little Trinity Lane, E.C.4. Opening of the second conference of the Incorporated Institute of British Decorators.

Saturday, July 29

Sunrise 5.18 a.m. Sunset 8.53 p.m.

ARCHITECTURAL ASSOCIATION. Exhibition of Students' work. Closing day.

WESTMINSTER TRAINING COLLEGE. 9.30 *a.m.* Lecture by C. W. Glover, L.R.I.B.A., on "The Principles of Acoustical Control. Also on *August* 1, *at* 2.30 *p.m.*

NEWS

●

POINTS FROM THIS ISSUE

Names of Foundation Council of the Institute of Registered Architects .. 99

Stoke : 12,500 houses are required now to abate overcrowding at over 1½ per room. The new Stoke Five Year Slum Clearance Plan provides for the building of 4,420 houses in five years 113

Town-planning legalizes the bad, and makes impossible the good . . . it compels the general principle of the gap 116

In 1931 £15,000,000 came into the English revenue from the holiday visits of tourists from foreign countries 121

●

COTTAGES IN THE STRAND

The Building Centre prize-winning cottages erected on the Aldwych site in the Strand have been visited by over 10,000 people, and a general census of opinions has been taken.

A number of criticisms were received, and as a result various alterations have been made in the cottages to meet the suggestions for improvement. These have been carried out in one of the cottages so that a comparison could be made between the cottage originally designed by the architect and the one altered according to the suggestions made by lay members of the public.

The cottages in the altered state will remain on exhibition until the end of August.

LORD MOYNE'S COMMITTEE

The Report of the Committee on Housing, of which Lord Moyne is Chairman, will probably be signed by the end of this month. In that case it may be published within the course of the next few weeks. It is understood that members of the Committee look with considerable favour upon the work of voluntary housing societies, and recognize how much they can assist in providing for the needs of the poorest. At the same time the record of bankruptcies of these societies since the war makes their financial stability somewhat uncertain.* They can receive loans up to 90 per cent. out of public money, but such proportion is not likely to be allocated unless the societies are particularly well administered and have substantial financial resources. So many mistakes are committed by enthusiastic reformers that the risks of loss are high. It will, therefore, occasion some surprise if the Government are prepared to risk any more public money on the work of these societies.

BULLETIN No. 2

The "Bulletin of Information" issued this week by the Special Committee for Public Relations of the Building Industries National Council presents unanswerable arguments in favour of the employment of the building and construction industry upon nationally planned public works. It is shown that world opinion advocates public works, not merely as the only antidote to restricted trade, but also as a means to national and international rehabilitation.

The activities of the Special Committee for Public Relations may be followed in this "Bulletin," which presents a means of establishing contact with the industry, and which also provides a means of following its fortunes. Correspondence on matters of importance to the industry as a whole is invited, and will be printed at the discretion of the Editor. The "Bulletin" is now available to the general building public, and may be obtained, price 6d., at the offices of the Council, 5 Duke Street, Adelphi, W.C.2.

Subscriptions to the General Fund of the Committee may be made payable to "The Special Committee for Public Relations," and should be addressed to the Honorary Treasurer at the above address.

NEW PIER PAVILION AT COLWYN BAY

Professor S. D. Adshead, chief of the Department of Civic Design, London University, formerly Professor of Town Planning at Liverpool University, and a town-planning expert to the city of New York, has been invited by the Colwyn Bay Council to prepare a group of alternative plans for a civic and entertainment centre to take the place of the Pier Pavilion, destroyed by fire early this summer.

Professor Adshead's task will be to assess the suitability of certain central sites in the town and to prepare alternative sketch plans for a large winter garden, town hall, conference chamber and entertainments pavilion.

A proposal to establish the pavilion on the site of a sunken railway goods yard close to the promenade has been abandoned owing to the cost, and alternative sites are now being considered.

MAINTENANCE COSTS OF PUBLIC BUILDINGS

Sir Hilton Young, the Minister of Health, has appointed a Departmental Committee whose terms of reference are :—

"To consider and report on the questions of the capital cost of construction and the annual cost of maintenance of the following classes of public buildings provided by local authorities, viz., hospitals (including mental hospitals), public assistance institutions, mental deficiency institutions, maternity homes (including maternity departments newly constructed or added to hospitals), and baths and wash-houses, special regard being paid to : (*a*) The establishment and periodic revision of standards ; (*b*) modern methods of construction ; and (*c*) the possibility of securing a reduction in present costs without impairing the efficiency of the buildings for the purposes for which they are designed."

The Committee is appointed in pursuance of a recommendation made by the Committee on Local Expenditure in their Report (Cmd. 4200) of October, 1932, and in accordance with the announcement made in the Minister's Circular 1311 of March 22, 1933.

The members of the Committee are as follows :—

Sir L. Amherst Selby-Bigge, Bart., K.C.B., J.P. (chairman) ; J. Allcock, Esq., O.B.E., F.I.M.T.A., F.S.A.A. ; N. B. Batterbury, Esq. ; H. W. Bruce, Esq., M.D., F.R.C.S. ; R. C. Cox, Esq., M.INST.C.E. ; J. Ferguson, Esq., B.A., M.B., D.P.H. ; J. Kirkland, Esq., O.B.E., F.R.I.B.A. ; T. S. McIntosh, Esq., M.A., M.D., F.R.C.P.ED. ; R. H. P. Orde, Esq., B.A. ; L. G. Pearson, Esq., F.R.I.B.A. ; A. Scott, Esq., M.B.E., F.R.I.B.A., M.I.STR.E. ; W. Rees Thomas, Esq., M.D., F.R.C.P., D.P.M. ; Dame Janet M. Campbell, D.B.E., M.D., M.S. ; Miss F. Barrie Lambert, C.B.E., M.B., B.S., D.P.H.

The Secretary of the Committee will be Mr. J. Topping, of the Ministry of Health.

LIVERPOOL SCHOOL'S NEW BUILDING

The new Leverhulme Building, for the Liverpool School of Architecture, was opened on Friday by Lady Leverhulme. The ceremony was held in conjunction with the annual exhibition of the work of past and present students of the School.

The new building is the gift of the late and the present Lord Leverhulme, and the scheme incorporates four Georgian houses, which remain as they were externally, apart from their new balcony railings and brightly painted doors. The new block, which is built round a central courtyard made from the gardens of the existing houses, consists of five large studios, lecture rooms, criticism rooms, etc., on two floors, the upper one being set back to admit more light. The walls internally are of unplastered grey brick. The external elevation to the street has long horizontal windows on the ground floor, but at first floor level the greyish brown brick wall is unrelieved by windows.

The new building was designed by Professor C. H. Reilly, Professor Lionel Budden, and Mr. J. E. Marshall, with interior decorations by Mr. E. R. F. Cole.

The cost of the whole scheme was about £30,000, working out at about a shilling a foot cube.

BERMONDSEY'S £1,065,000 FOR SLUM WAR

A plan for rehousing 10,000 Bermondsey workers in seven and a half years at a cost of £1,065,000 is announced in a statement to the Building Industries National Council by Mr. E. C. Freeman, Housing Director of the Bermondsey Borough Council.

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* See Astragal's notes.

"The Borough Council in November, 1930, adopted a five-year plan of slum clearance under the Housing Act of 1930, and 2½ years of this plan is yet uncompleted," says Mr. Freeman. "Up to the present, 21 clearance areas have been declared, 365 insanitary dwellings have been demolished and 551 new dwellings have been completed, which rehoused 2,773 persons. In addition, 300 dwellings are in course of erection, 100 of which will be completed within the next week or two.

"In accordance with the recent Ministry of Health Circular 1331 calling upon local authorities to submit a five-year plan of slum clearance, the Borough Council have prepared an additional five-year plan, and this, with the uncompleted 2½ years of the previous plan, gives a 7½-year plan.

"This 7½-year plan provides for the clearance of a further 14 areas and the demolition of 1,090 dwellings. To rehouse the persons who will be displaced, 1,500 new dwellings are to be erected. The work will give direct employment in the actual building to 350 men for the full period of 7½ years; additional employment will, of course, be given to workers engaged in production and manufacture of materials. It is estimated that the work in connection with this 7½-year plan will cost £1,065,000 and that, by 1940, when the work will be completed, we shall have rehoused at least 10,000 people.

"The obtaining of housing sites is one of our chief difficulties. Except for about three acres of land which the Borough Council acquired from the Port of London Authority, no vacant land is available within the borough. The Borough Council is not empowered to acquire sites outside its boundaries. However, Bermondsey is managing to carry out its present plans by acquiring disused factory sites."

NEW FLATS IN KENTISH TOWN

Athlone House, a block of ten model flats in Wilkin Street, Kentish Town, was opened last week by Princess Alice, Countess of Athlone. The flats were built by the North St. Pancras group of the St. Pancras House Improvement Society, and are intended for families whose children are beginning to earn wages. The rental is fixed at 4s. 6d. a room, not including kitchen and bathroom, which brings the rental to 18s. Each flat contains a coal range for cooking; otherwise they are electric flats, the water being heated by electricity, and labour saving devices such as electric irons are obtainable on easy terms. There are built-in cupboards, and some of the balconies have built-in window boxes. Metal fittings have been used wherever possible, to prevent the lodgment of bugs.

UNEMPLOYMENT IN THE BUILDING INDUSTRY

Sir Raymond Unwin presided at a meeting of the Special Committee for Public Relations at the R.I.B.A. on Monday.

A bulletin issued by the Special Committee stated that, "contrary to general expectation, the economic position of the building and public works industry showed an appreciable deterioration in June. Unemployment, which diminished, month by month, from a level of 457,200 in January, to 294,000 in May, increased by 779 to 295,000 in June.

Referring to Mr. Runciman's statement that "the United Kingdom Government considered that nothing would be gained at present by developing its public works policy," Sir Raymond Unwin said that a house could be built for £350, and in building it there would be a saving of from £70 to £80 in unemployment pay, which would provide a sinking fund that would redeem the house in about 35 years. Between 1,500,000 and 2,000,000 houses are required.

All Saints Church, Uplands, Stroud. The tower, side chapel and western porches, designed by Leslie T. Moore, have just been completed. The church is stone faced both inside and out and has a Cotswold stone roof. It was built in 1910 from the designs of Temple Moore.

SLUM

Both Mr. Baldwin and Sir Hilton Young during the last week-end have talked a great deal about the slum campaign, and their speeches, like those of many other distinguished people, bear traces of the influence of THE ARCHITECT'S JOURNAL Special Slum Number.

Students of the subject should, however, note that the London County Council, which has just put forward a comprehensive programme for displacing and rehousing 250,000 persons during the next ten years, at a cost of about £35,000,000, is apparently in disagreement with the Minister of Health. The Housing Committee of the London County Council state definitely that, in their opinion, nothing in the nature of a definite programme with lists of areas, and a time and progress schedule, as suggested by Sir Hilton Young, can be attempted. They take the view that efforts in the past to frame programmes in advance have not proved helpful. In short, the policy for London is to allocate £35,000,000 and to try to synchronize the clearing of slums with a continuous supply of rehousing accommodation.

COMPLETION OF BELFAST CATHEDRAL

Sir Charles Nicholson, architect to the Dean and Chapter of St. Anne's Cathedral, Belfast, has, at the request of the Cathedral Guild, drawn up a scheme for the completion of the east end of the building, and this has now received approval.

THIS ARSHETECTURE

When, with innate courtesy, Mr. Nichols conducted me down the staircase toward the front door, he paused in the passage with his hand on the handle of the door of the room which I had surmised was his dining-room, and asked:

"Perhaps you'd like to see in here?"

Having enjoyed the artistry of his drawing-room, with its distinctive pictures, its old-world fireplace, and its exquisite ornaments, my answer was an eager affirmative.

And then he thrust the door wide open to disclose—a garage! For a carpeted floor there was an asphalted area, and the window had been replaced by french doors which were draped with muslin curtains, thus concealing from the street the unique transformation of the one-time dining-room.

"Passers-by," he quietly chuckled, "are much astonished to see my car emerge from the side of the house."

—*From "An Interview with Beverley Nichols" in* THE BOOK WINDOW

SOCIETIES AND INSTITUTIONS

TOWN PLANNING INSTITUTE

Mr. T. Alwyn Lloyd, F.R.I.B.A., has been elected President of the Town Planning Institute at the Council meeting on July 14. It has been decided to hold the Annual Country Meeting at Cardiff on October 6 to 9, 1933.

Mr. Lloyd has been connected with town planning work in a professional capacity for many years, and is architect to the Welsh Town Planning and Housing Trust. He has prepared several Town Planning Schemes for local authorities and is architect for the Great Western Railway Company's Garden Villages. He was President of the South Wales Institute of Architects in 1929-31, and at present is Chairman of the National Housing and Town Planning Council.

BRIXTON SCHOOL OF BUILDING

Mr. Norman Keep, F.R.I.B.A., has been appointed Head of the Senior Day School and the Evening Building Department at the School of Building, Brixton, S.W.

THE INSTITUTE OF QUARRYING

Only one award was made by the adjudicators in the Sir Henry Maybury Competition of the Institute of Quarrying this year, that being a Bronze Medal and Fellowship to an Australian Member, Mr. H. Griffiths, 32, Barker Road, Strathfield, N.S.W.

The Gold Medal was not awarded this year.

CONGRESS OF THE ROYAL SANITARY INSTITUTE

Mr. Stanley H. Badock, LL.D., J.P., Pro-Chancellor and Treasurer of the University of Bristol, has accepted the office of President of the next Congress of the Royal Sanitary Institute, which is to be held at Bristol from July 9 to 14, 1934.

R. I. B. A.

REVISION OF THE SCALE OF PROFESSIONAL CHARGES

In April, 1927, the Council appointed a Special Committee to consider and report on the revision of the R.I.B.A. Scale of Charges.

The Committee reported to the Council from time to time and in May, 1929, the draft revised scale was circulated to members for their consideration and was considered at general meetings of the Institute in June and July of that year.

The criticisms and suggestions put forward at the general meetings were submitted to the Special Committeee by the Council for consideration and report.

The draft scale as further amended in the light of the suggestions put forward was again circulated to members in September, 1930, in accordance with the terms of Bye-law 38, and the comments and criticisms of members were invited.

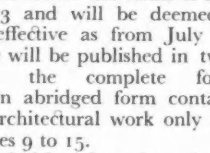
The suggestions and criticisms submitted to the Council were referred to the Special Committee for consideration and report. The Committee also had the benefit of the views of the Allied Societies which were obtained at the request of the Allied Societies' Conference.

The revised scale was finally approved by the Council under the terms of Bye-law 38 on July 3 and will be deemed to have become effective as from July 22, 1933. The scale will be published in two forms, viz., in the complete form, and also in an abridged form containing the fees for architectural work only and omitting clauses 9 to 15.

Copies of either form bound up in the same way as the 1919 scale may be obtained on application to the Secretary, R.I.B.A., price 3d. a copy.

The 1919 Scale has now been withdrawn from circulation.

COMPETITION NEWS



A. A. COMPETITION

The Architectural Association has organized a competition for speculative house designs with the co-operation of Mr. J. W. Laing, of Messrs. John Laing and Son, Ltd., contractors.

The competition is for three types of houses and there will be three premiums of £25 each. Messrs. Laing have undertaken to erect houses from the winning design on an estate at Mill Hill, and fees under the new R.I.B.A. scale for such work will be paid.

The basis of the competition is that it is assumed that if the architect is to take any share in the design of houses erected by speculative builders and contractors he must produce something which will sell as well as, if not better than, the average house erected on a speculative basis today.

It is felt that very close consideration should be given to the definite requirements and likes and dislikes of the public who buy houses put up on a speculative basis.

The conditions of the competition are accompanied by typical plans of houses which are being built on a speculative basis, and which it is known appeal to the buying public, and it is left to the competitor, whilst providing the same area of accommodation, to improve upon these plans. The schedule of preferences and general requirements of the public is included in the competition's conditions as a guide. This schedule has been drawn up by Messrs. Laing from their own experience of selling houses.

The competition is open to all members of the Architectural Association and the Royal Institute of British Architects, and will be assessed by the following jury :—

Mr. C. Lovett Gill, F.R.I.B.A.
Mr. L. H. Bucknell, F.R.I.B.A.
Mr. J. R. Leathart, F.R.I.B.A.
Mr. Arthur W. Kenyon, F.R.I.B.A.
Mr. T. Alwyn Lloyd, F.R.I.B.A.
Mr. J. W. Laing.

Copies of the conditions are being issued free, on application, to all members of the Architectural Association, and members of the Royal Institute of British Architects can obtain copies (price 2s. 6d.) from Mr. F. R. Yerbury, General Secretary, The Architectural Association, 34-36 Bedford Square, W.C.1.

COMPETITION BARRED

The R.I.B.A. has issued the following notice about the competition for the Proposed Infants' School, Tunnel Hill Road, Worcester.

"Members of the Royal Institute of British Architects and of its Allied Societies must not take part in the above competition because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions."

Competitions Open

September 1.—Sending-in Day. Proposed Hospital at Surbiton. Assessor : C. E. Elcock, F.R.I.B.A. Premiums: £120, £75, £50 and £25. The conditions, obtainable from A. C. C. Dunn, Hon. Secretary, Surbiton Hospital, St. James's Road, Surbiton, were reviewed in *A.J.* for May 24.

September 11.—Sending-in Day. The Directors of Gidea Park, Ltd., invite designs for five different types of house (ranging from £400 to £900). Assessors : Prof. S. D. Adshead, F.R.I.B.A., A. E. Beresford, F.R.I.B.A., Ald. Ewart G. Culpin, F.R.I.B.A., E. Maxwell Fry, A.R.I.B.A., Howard Robertson, F.R.I.B.A., and W. Harding Thompson, F.R.I.B.A. In addition to being paid a fee according to the scale of charges of the R.I.B.A., the authors of the first five selected designs in each class will be paid a premium of £10. Particulars obtainable from Gidea Park, Ltd., The Estate Office, Hare Street, Gidea Park, Romford, Essex. Deposit 5s.

September 21.—Sending-in Day. Proposed Town Hall for the Borough of Hornsey. Assessor : C. Cowles-Voysey, F.R.I.B.A. Premiums : £350, £250 and £150. Full conditions, etc., were published in our issue for May 17.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor : H. S. Goodhart-Rendel, F.R.I.B.A. Premiums : £150, £100 and £50. Conditions have not yet been drawn up.

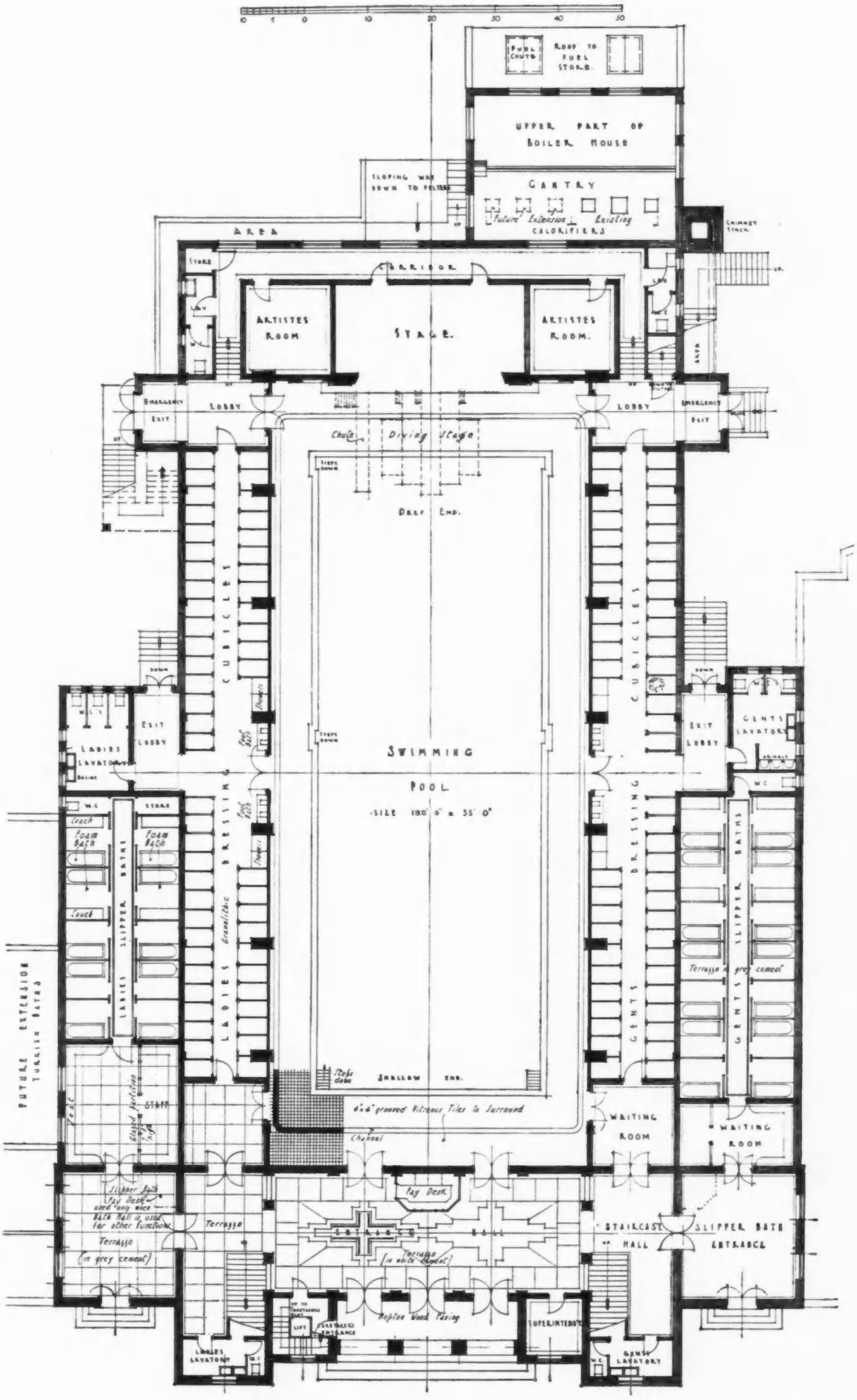
Development of the coastguard site, Bexhill. Assessor : T. S. Tait, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor : R. S. Wilshere A.R.I.B.A. Conditions are now being drawn up by the assessor.

Decoration of a café-restaurant. Assessors : G. Grey Wornum, F.R.I.B.A. ; Louis de Soissons, F.R.I.B.A. ; G. Alan Fortescue, F.R.I.B.A. Premiums : 50 guineas, 15 guineas and 10 guineas.

Conditions governing the competition, which closes on December 15, 1933, will be issued on September 30 next.

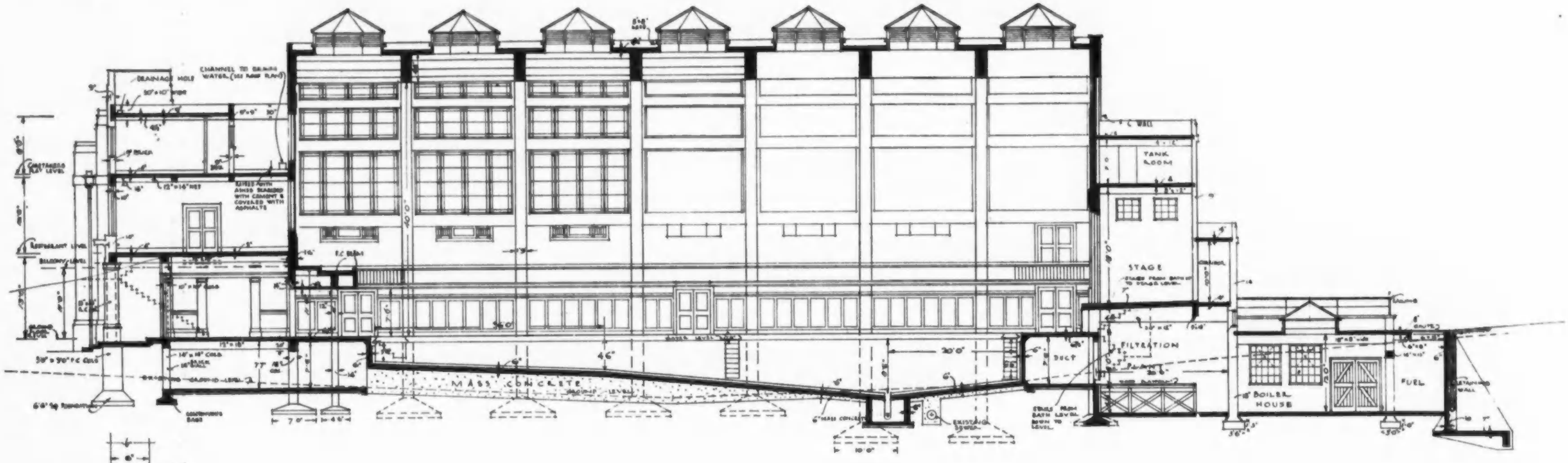
SMETHWICK BATHS


10 5 0 10 20 30 40 50
FUEL CHUTE
ROOF TO FUEL STORE.
UPPER PART OF BOILER HOUSE
GANTRY
SLOPING WAY DOWN TO FILTERS
Future Extension Existing
CALORIFIERS
CHIMNEY STACK
AREA
STORE
CORRIDOR
LAV
W.C.
ARTISTES ROOM
STAGE.
ARTISTES ROOM.
AREA
EMERGENCY EXIT
LOBBY
LOBBY
EMERGENCY EXIT
Chute
Diving Stage
STEPS DOWN
DEEP END.
CUBICLES
CUBICLES
EXIT LOBBY
LADIES LAVATORY
EXIT LOBBY
GENTS LAVATORY
SWIMMING POOL
SIZE 100' 0" x 35' 0"
STORE
Couch
Foam Bath
Foam Bath
Couch
LADIES SLIPPER BATHS
LADIES Granolithic DRESSING
GENTS DRESSING
GENTS SLIPPER BATHS
Terrazzo & grey cement
FUTURE EXTENSION TURKISH BATHS
Rest
Glazed partition
STAFF
Steps down
SHALLOW END.
4"x4" grooved Vitreous Tiles to Surround
Channel
WAITING ROOM
WAITING ROOM
Slipper Bath Pay Desk used only when Bath Hall is used for other functions
Terrazzo
(in grey cement)
Terrazzo
Pay Desk
ENTRANCE HALL
Terrazzo (in white cement)
STAIRCASE HALL
SLIPPER BATH ENTRANCE
LIFT
Ruptoo Wood Paving
SUPERINTENDENT
LADIES LAVATORY
W.C.
W.C.
GENTS LAVATORY

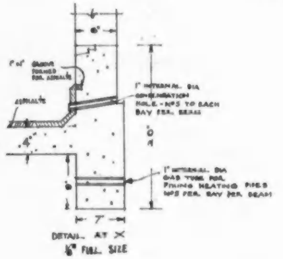
GROUND FLOOR PLAN

DESIGNED BY ROLAND FLETCHER AND CHESTER BUTTON

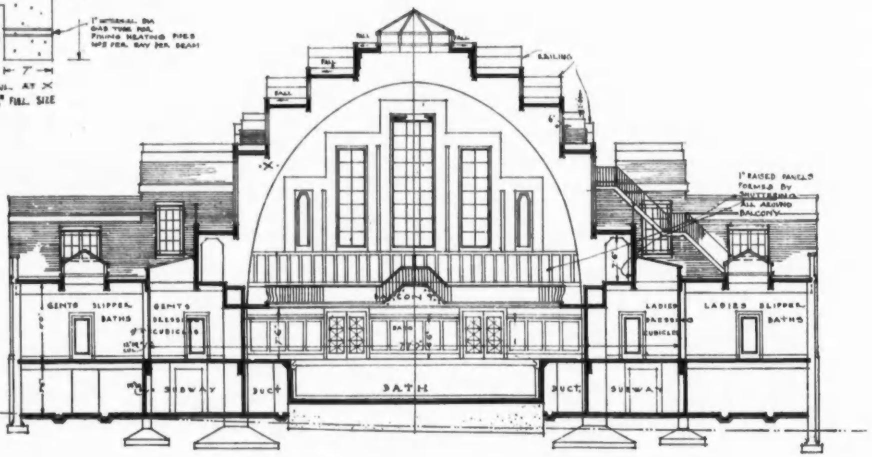
SMETHWICK BATHS, BIRMINGHAM


CHANNEL TO DRAIN WATER (SEE ROOF PLAN)
DRAINAGE HOLE
CANTILEVER LEVEL
RESTAURANT LEVEL
BALCONY LEVEL
12" x 14" HEJ
FILLED WITH ASHES SCREEDED WITH CEMENT & COVERED WITH ASPHALTE
R.C. BEAM
14" x 14" COLS
7'0"
4'6"
46'
36'0"
20'0"
MASS CONCRETE
6" MASS CONCRETE
EXISTING SEWER
10'0"
DUCT
STAIRS FROM BATH LEVEL DOWN TO LEVEL
R.C. WALL
TANK ROOM
STAGE
STAIRS FROM BATH LEVEL TO STAGE LEVEL
FILTRATION
BOILER HOUSE
FUEL
RETAINING WALL
3'6"
5'0"

LONGITUDINAL SECTION

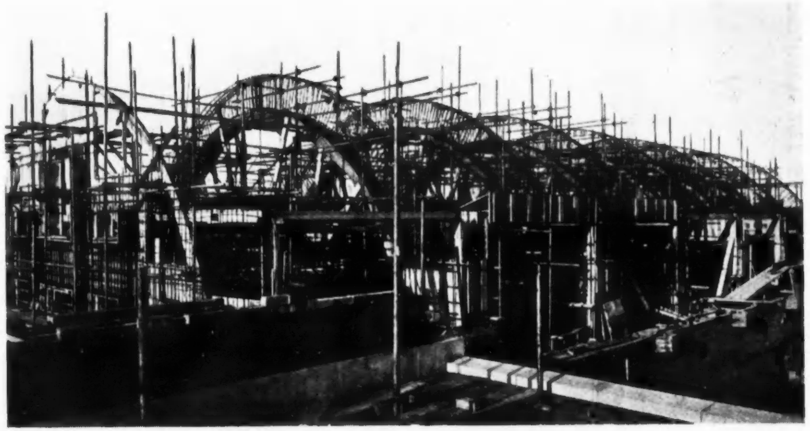

6"
8"
GROOVE FORMED FOR ASPHALTE
ASPHALTE
1" INTERNAL DIA CONDENSATION HOLE—NOS TO EACH BAY PER BEAM
1" INTERNAL DIA GAS TUBE FOR FIXING HEATING PIPES NOS PER BAY PER BEAM
7"

DETAIL AT X
6" FULL SIZE


RAILING
X
1" RAISED PANELS FORMED BY SHUTTERING ALL AROUND BALCONY
GENTS SLIPPER BATHS
GENTS DRESSING CUBICLES
BALCONY
BATH
LADIES DRESSING CUBICLES
LADIES SLIPPER BATHS
SUBWAY
DUCT
BATH
DUCT
SUBWAY

CROSS SECTION LOOKING TOWARD ENTRANCE OF BATH

The sections are to the same scale as the plans.



These Baths, for the County Borough of Smethwick, were designed by Roland Fletcher, the borough engineer and surveyor, and Chester Button, chief architectural assistant.

Smethwick has no Town Hall, and in the planning provision had to be made so that the Bath Hall could be used for dances, public meetings, etc. It is proposed to cover in the Swimming Bath for the winter months with a spring floor, and seating accommodation will be thereby rendered available for 1,300 people.

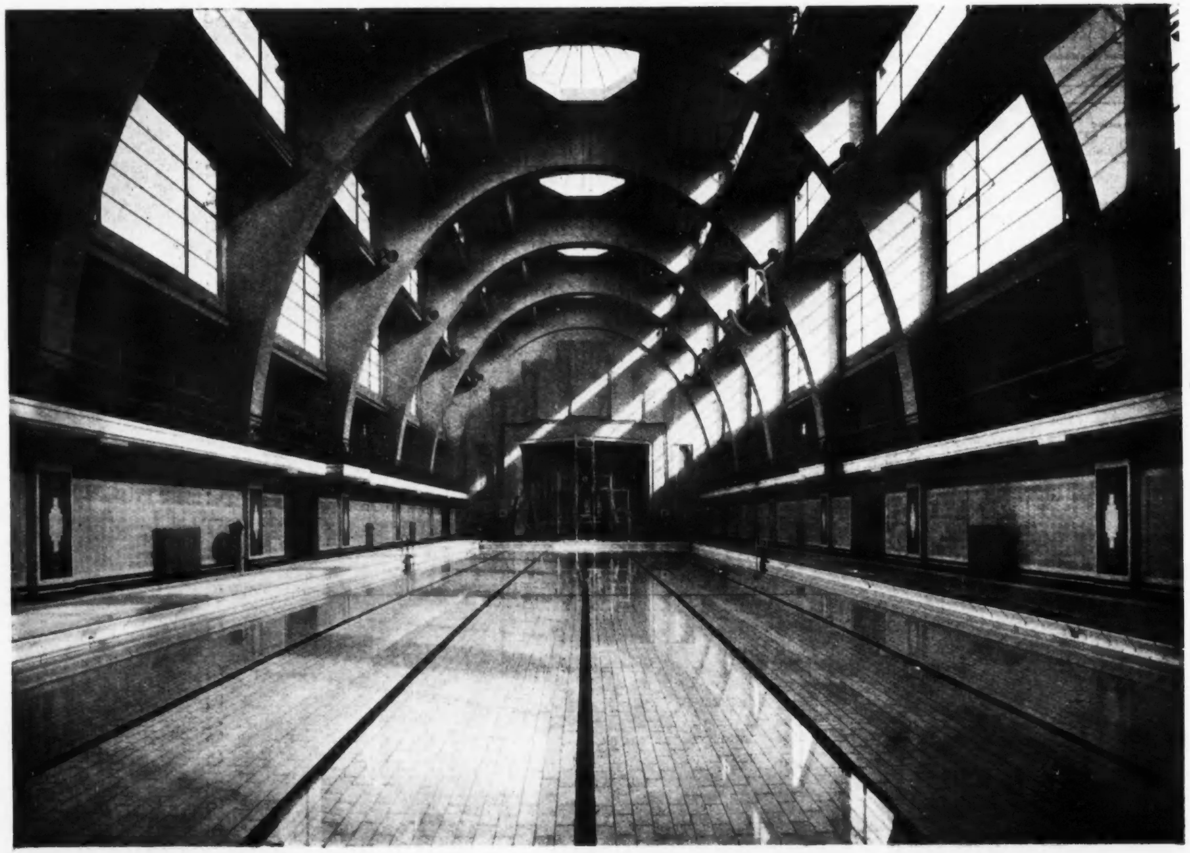
The building is constructed mainly of reinforced concrete, the Bath Hall being designed with elliptical arched ribs supporting a series of terraced windows and roof flats. The exterior is faced with rustic bricks and reconstructed stone. The walls of the Swimming Bath are lined with asphalt, faced with white glazed bricks, and the surround is of non-slip grooved tiles with a stone edging. The walls of the Bath Hall below the balcony are faced with glazed tiles. The Slipper Baths and Dressing Cubicles are formed with pre-cast terrazzo slabs, with floors of terrazzo and granolithic.

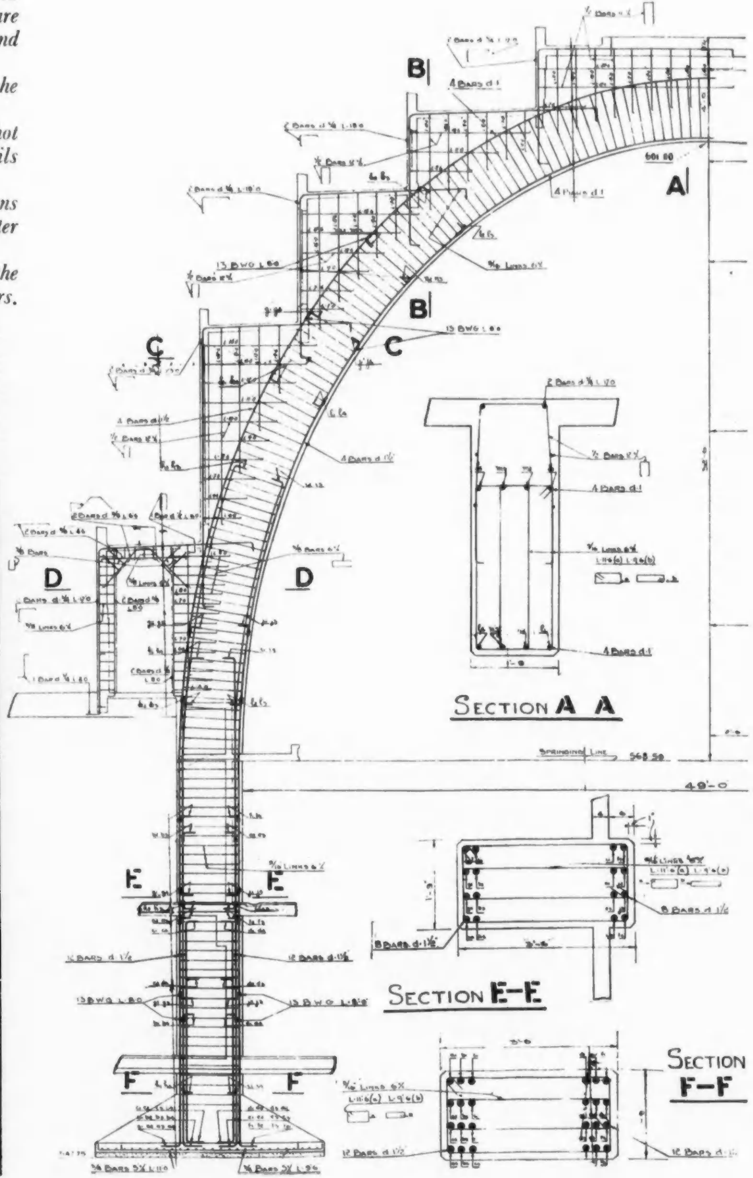
The Superintendent's Flat is on the second floor, and in the basement are the boiler-house, filtration plant, etc.

The general heating of the building is by low-pressure hot water, but the upper part of the Bath Hall is heated by steam coils placed under the windows to minimize condensation.

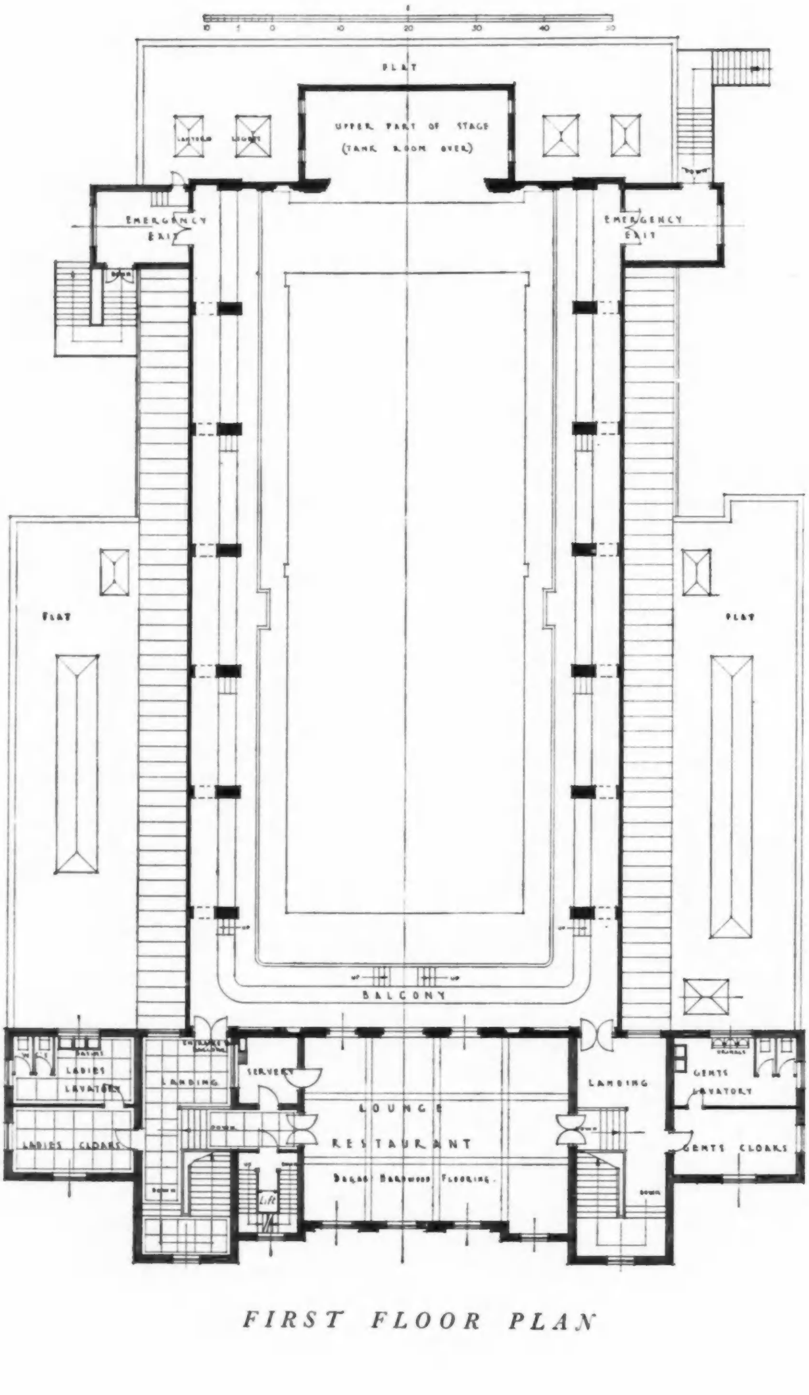
Any slight condensation that may occur is provided for by means of channels formed in the concrete cills to take the condensed water out of the building.

The filtration plant is capable of treating the full content of the Swimming Bath, amounting to 124,000 gallons, once in every four hours.





SMETHWICK BATHS


10
5
0
10
20
30
40
50
FLAT
LANTERN
LIGHT
UPPER PART OF STAGE
(TANK ROOM OVER)
DOWN
EMERGENCY EXIT
EMERGENCY EXIT
DOWN
FLAT
FLAT
UP
UP
UP
UP
BALCONY
W.C.
BASINS
LADIES LAVATORY
ENTRANCE
LANDING
SERVERY
LOUNGE
RESTAURANT
DOWN
LADIES CLOAKS
UP
DOWN
LIFT
DOWN
HARDWOOD FLOORING.
LANDING
GENTS LAVATORY
DOWN
GENTS CLOAKS
DOWN

FIRST FLOOR PLAN

DESIGNED BY ROLAND FLETCHER AND CHESTER BUTTON

LETTERS FROM READERS

O. D. GODFREY

SIR EDWIN L. LUTYENS, R.A., P.INST.R.A., P.I.A.A.S.

F. R. YERBURY, HON. A.R.I.B.A.

A. TRYSTAN EDWARDS, F.R.I.B.A.

J. M. RICHARDS, A.R.I.B.A.

Inigo Jones

SIR,—It is with distinct surprise that I find a note on page 36 of last week's JOURNAL, concerning Inigo Jones to the effect that he died in poverty.

There is the authority of Mr. J. Alfred Gotch, in his recent work upon Jones, for saying that the JOURNAL's Patron Saint was almost affluent at death ; according to Mr. Gotch he left £100 for his funeral expenses and a further £100 for a monument " to bee made of white Marbele." Mr. Gotch mentions £4,150 for specific legacies and to this must be added a sum of £500 lent to King Charles I prior to the King's capture at the seige of Basing House.

It being reasonable to assume that the value of money is today five times greater than nearly three hundred years ago, Jones can hardly be described as poor ; in fact, many members of the profession would be thankful to feel that they might have as much to leave at death.

O. D. GODFREY

Institute of Registered Architects

SIR,—Although the Architects' (Registration) Act was passed in 1931 and some thousands of architects are already admitted to the Register, scarcely anyone outside the ranks of the profession knows what " registered architect " means.

The Act needs amendment, but its intention is to provide those admitted to the Register with a valuable, legally protected description. The business of admitting to the Register rests with the Architects' Registration Council. *The business of making the status of those admitted to the Register comparable with that enjoyed by the legal and medical professions rests with registered architects themselves.*

It is obvious, therefore, that, if registration is to attain its proper value, registered architects must organize to consolidate their interests and to amend the Act, and to make their title, and the value of their title, known and respected.

It may be that the majority of those architects already registered are members of one or other of the organizations represented on the Registration Council —but many are not. In any case, a large number of those already registered, or entitled to be registered, may consider that the mere act of registration is sufficient—unless they are able to express their views through an organization confined to the prosecution of their aims as registered architects.

The need for an organization complementary to the various architectural societies and focussing the aims of the registered architect is thus apparent.

The Institute of Registered Architects, wholly composed of registered architects and solely devoted to their interests, has therefore been established, and its primary aims will be :—

(1) To consolidate the position of the registered architect :

(2) To complete the protection of the registered architect and the building public by amendments to the Act ;

(3) By efficient propaganda to establish the title and qualifications of the registered architect in the confidence and esteem of the public ;

(4) To discourage building work without qualified architectural service and commensurate fee ;

(5) To establish a code of professional practice acceptable in the Courts ;

(6) Generally to protect the statutory rights of the registered architect and to advance his status to the public advantage.

The affairs of the Institute will be administered by a Council representative of the principal architectural interests, and providing a central organization for corporate expression in all matters affecting registered architects. The error of extreme centralization is appreciated, and it is anticipated that a policy of decentralization through local units (each with its own headquarters) will be developed as rapidly as possible.

The Foundation Council—all registered architects—are inviting other organizations to co-operate with and assist The Institute of Registered Architects and have already received assurances of support in this direction.

The Institute of Registered Architects will insist on its members conforming to a code of professional practice and the observance of rules for the general good of the profession, *although the Act makes no such stipulation.*

Membership of The Institute of Registered Architects will carry with it the privilege of using the designatory letters—

" M.Inst. R.A."

Its members will be architects who have proved to a statutory authority their qualifications to practise and to possess the privilege of a statutory title, and who have expressed, through their membership of the Institute, their intention to conform to a code of professional ethics.

Thus the designatory letters of The Institute of Registered Architects will become the hall-mark of competence and trustworthiness, creating a public demand for the services of those architects who bear them.

EDWIN L. LUTYENS
President

POSTSCRIPT

Members admitted before December 31, 1933, will be denominated Foundation Members, by whom No Entrance Fee will be payable.

The Annual Subscription for a Foundation Member is Two Guineas, but a concession will be made to members of all recognized architectural bodies—so long as they remain members thereof—to the extent of One Guinea. The Annual Subscription for such a member will therefore be One Guinea.

The Building Centre

SIR,—The Building Centre and the architect of the Strand Cottages have had many hundreds of letters from people all over the country who want to build similar cottages.

It is obvious that these should be built as far as possible by builders in the district of their requirer.

The difficulty is to make contact with the builders in the different districts who would like to avail themselves of the opportunity to build these houses at or near the price of £225 each, in accordance with the specification.

It has occurred to the Directors of the Building Centre that they could perform a useful service by extending an invitation to all those builders interested, to forward their names to the Centre to be passed on to the enquirer, who will then make his own arrangements direct, for the placing of his contract.

As the sole purpose of the Building Centre in creating the Competition in the first place was to assist the housing problem by finding the most suitable and economical design, it will be hardly necessary to add that there will be no charge for this service.

F. R. YERBURY
Director

The Architecture of Shops

SIR,—As it is the honourable tradition of your JOURNAL that, when one of your readers is attacked in its pages, you vouchsafe to him the opportunity of a reply, with your permission I shall offer a few observations upon a review of my book entitled *The Architecture of Shops*, to which you were kind enough to give prominence in your issue of July 20.

Perhaps it will be the best procedure if I quote a few of your reviewer's remarks and add my comments upon them. On page 80 of THE ARCHITECTS' JOURNAL, column 1, he complains of "occasional imperfect syllogisms" that "have crept into" my arguments and my "rather more frequent generalizations based on somewhat doubtful premises." Now surely your reviewer, Mr. J. M. Richards, if he possesses a sense of humour, must realize that he is being merely comic if he accuses me of "occasional imperfect syllogisms" and "frequent generalizations, etc.," and at the same time fails to quote for the reader's information a single example of my delinquencies in these respects. In failing to do this is he not himself obviously guilty of "generalizations based on somewhat doubtful premises?" He does, however, cite "as a completely meaningless remark" a statement which he quotes from page 27 of my book "Nowadays the façades are apt to be too tall, and there are too many windows." Of course, the sentence appears meaningless, because Mr. Richards has not allowed your readers to be acquainted with it in its original form. The sentence runs: "Nowadays, however, the façades are apt to be too tall, and consequently there are too many windows, and it is very difficult to devise a pattern of fenestration which strikes the happy mean between monotony and fussiness." I thereupon proceed to refer to photographs illustrating the point. No wonder that Mr. Richards finds "imperfect syllogisms" in my book, if he cuts sentences in two and ignores the connecting links between my statements. I do not, of course, accuse Mr. Richards of deliberate dishonesty, but I find in nearly every paragraph of his review evidence of the same hasty reading as is exemplified in the instance which I have just given.

I have space to refer to only one other point raised by your reviewer. At the end of the caption on page 81 of your issue of July 20, he makes the surprising assertion that the two lower illustrations reproduced from my book, "demonstrate the fact that the modern idiom, even when caricatured as it is here (and often is in practice) is actually a direct descendant" of the Regency tradition. "A direct descendant" is in this context a rather misleading expression. Ahab was a direct descendant of King David, but that statement does not imply a eulogy of Ahab. But does Mr. Richards really mean to say that the street façade to which he alludes has any of the essential qualities of the Regency style? I should be glad to know whether there is a single other reader of your JOURNAL who would agree with him.

A. TRYSTAN EDWARDS

[*This letter has been submitted to our reviewer who has sent the following reply.* —Ed., *A.J.*]

SIR,—Vague generalizations, by their very nature, are too cumbersome to quote; so I have no way of repelling Mr. Trystan Edwards's ingenious counter-attack in demanding chapter and verse for my accusations against him, except by recommending to the JOURNAL's readers that they acquire his otherwise stimulating book and see for themselves.

The actual instance that he quotes of a sentence that I objected to is only, I think, one of those cases of interpretation of a difficult sentence that are (except to the author himself) of no more than dialectic interest, and I hope he will forgive my passing at once to more momentous matters.

I am disappointed that he is not willing to dispute some of the more general questions on which we disagreed, such as the nocturnal lighting of shopping streets and the retention of the human scale at pavement level only, but he has left himself space to mention one point that is most certainly worthy of discussion, and he gives me the opportunity of re-stating an opinion the implications of which Mr. Trystan Edwards has, I think, completely failed to grasp. I did indeed mean to say that the modern idiom in street architecture has the same essential qualities as the Regency style. This statement surprised Mr. Trystan Edwards. I thought it would, because it was clear from Mr. Trystan Edwards's book that his affection for the Regency is based partly on admiration for particular examples, but chiefly on his appreciation of the humanistic element in that leisurely and cultivated style which he sadly contrasts with the vulgarity of most contemporary building. This humanistic element, however, was only present in Regency architecture as part of the vernacular expression of that particular epoch and, though it dictated the form of the detail, it was not fundamentally a contributor to that quality of restraint and co-ordination that the Regency gave to urban development.

It is this same quality that the modern movement tries to foster and, stripped of their chronologically diversified detail, Regency and modern will be found to be travelling the same road of harmonious and homogeneous urban development away from the individualism which is their common enemy.

J. M. RICHARDS

IN PARLIAMENT

The Adelphi Doomed

AN animated debate took place in the House of Commons on Monday, July 24, when the Adelphi Estate Bill came up for consideration after its approval by the Select Committee.

Sir A. Steel-Maitland moved the following amendment:—

"Provided also that a new public thoroughfare comparable to the existing Adelphi Terrace shall be erected on the south front of the proposed new building connecting with Adam Street and Robert Street with a view over the gardens and river as at present."

Mr. Smith-Carington, speaking as a member of the Select Committee which considered the Bill, said that the days of Adelphi Terrace as they knew it were numbered. Whether the Bill passed or not the existing buildings were, in all probability, likely to disappear within a short time. That might be vandalism, but it was a fact. A roadway not open to the sky was not likely to be allowed, and any road on the level of Adelphi Terrace and standing behind the lower road really meant taking away such an immense depth of frontage that in all probability the promoters would decline to go on with the Bill. (Loud laughter.) The amendment was really a wrecking amendment, and would be more suitable as a ground for rejection on third reading.

Sir Dennis Herbert, the Chairman of Committees, said that if the Bill was not passed now they would be throwing on the promoters the probable burden of having to bring in another Bill in the New Session, after all the work, trouble and expense incurred in promoting the present measure. He had been authorized by the promoters to say that they would not object to an arcaded pathway above the present arcaded pathway now proposed and on the level of the present Adelphi Terrace, not exceeding eight feet in width, provided that the L.C.C. and the Westminster City Council raised no objections to it.

An amendment to the amendment was proposed by Capt. Dower to insert, after the words, "Provided always," the words "in place of the proposed new street in the centre of the building," and to add at the end, "subject to 50 feet at each end in each building being arcaded."

This was rejected by 191 votes to 92—majority 99.

Sir A. Steel-Maitland's amendment was rejected by 196 votes to 97, and the third reading was carried by 242 votes to 97—majority 145.

SLUM

[In our SLUM issue for June 22 we dealt with the housing and slum clearance problems in six cities: Liverpool, Leeds, Manchester, Birmingham, Sheffield, and Glasgow. This week we give a similar analysis of the city of Stoke-on-Trent. To those who are sick of reading about slum *we offer our apologies. This survey has got to be made and there is nothing more to be said. We apologize also to those who are still asking in vain for copies of the Slum Issue. Although thousands of extra copies were printed it went out of print within a week or so of publication.*—ED., *A.J.*]

VIS UNITA FORTIOR

STOKE-ON-TRENT

[*By* PHILIP H. MASSEY]
B.Sc. (Econ.) F.R.Econ.S.

GENERAL POSITION

Area		21,209 acres	
Population	1921	267,647	
	1931	276,639	(35,000 unemployed)

Decennial increase 8,992
(1921 population of areas added in intercensal decade 27,219)

1931	Persons per acre		13·0	
	Number of private families		62,748	
	Population in private families		269,839	
	Structurally separate dwellings occupied			58,096
			(vacant	404)
	Rooms occupied		258,538	
	Persons per room		1·04	
1921-31	Increase in occupied dwellings—not comparable			
	Increase in number of private families—not comparable			
	Families per occupied dwelling	1931	1·08	
	Average size of private family	1931	4·30	persons
	Average number of persons per room	1931	1·04	
	Persons living more than 2 per room	1921	not comparable	
		1931	33,446 or 12·39%	
	(Families living more than 2 per room	1931	4,370 or 6·96%)	

1931	Persons living over 3 per room	5,323
	3 and over 2	28,123
	Total over 2	33,446
	2 and over 1½	47,361
	Total over 1½	80,807
	1½ and over 1	72,197

61 families living 6 or more in 1 room
130 families living 8 or more in 2 rooms

The Wards

Number of wards in city	28
Number of wards containing over all average of over 100 persons per acre	nil
Number of wards containing over all average of over 80 persons per acre	nil
Number of wards containing over all average of over 1 person per room	17

Three Worst Wards on Persons Per Acre Standard

	No. 9	No. 15	No. 18
Acreage	225	202	201
Population 1921 ..	11,658	9,460	9,871
,, 1931 ..	11,662	8,933	8,945
Persons per acre ..	51·8	44·2	44·5
Private families ..	2,490	2,043	2,101
Population in private families ..	11,425	8,749	8,605
Structurally separate dwellings occupied ..	2,334	1,911	1,919
Rooms occupied	10,353	8,618	8,774
Persons per room..	1·10	1·02	0·98

Three Worst Wards on Persons Per Room Standard

	No. 2	No. 19	No. 24
Acreage	252	413	1,095
Population 1921 ..	9,830	8,150	12,618
,, 1931 ..	9,547	8,938	12,326
Persons per acre ..	37·9	21·6	11·3
Private families ..	2,026	1,988	2,576
Population in private families ..	9,425	8,850	12,186
Structurally separate dwellings occupied ..	1,844	1,784	2,417
Rooms occupied	7,891	7,391	10,130
Persons per room..	1·19	1·20	1·20

Note.—The fact that Persons Per Acre is not necessarily a good standard to take over a fairly large area such as a ward is well brought out in the case of Stoke. It will be noted that none of the worst areas on this standard corresponds with those selected by the Persons Per Room Standard, and that though 17 Wards out of 28 contain more than 1 person per room over all average, none of the Wards contains over 80 persons to the acre. It is, of course the mixture of houses with factories, etc., which makes Stoke so appalling.

"... the City at its liveliest is a seething mass of smoke, hanging heavily above a chain of urban groupings. Houses, factories, shops, mines, mills; all are thrown together in revolting confusion without even the semblance of a plan."

(From an investigation by local residents.) (This is quite just.)

The Facts of the Problem

Number of houses in improvement or clearance areas.

Population 279,200 (middle of 1929).
Number of houses 59,700.
Working class population Almost 250,000.
Number of working class houses 51,000.
Of these 51,000 houses

4,013 are contained in "Unhealthy Areas," i.e., Clearance Areas.
4,572 houses are contained in "Improvement Areas."

8,585 houses therefore lie within either Clearance or Improvement Areas, i.e., 1 in 6 of all working class houses.

(The pamphlet from which these figures

are taken has been read very carefully. It needs it. The authors of it are trying to overstate their case. They say, for example, that 8,585 houses have been declared unfit for human habitation. This is apparently quite untrue. The number given is simply the total of houses contained in Clearance or Improvement Areas. It is, of course, quite untrue to say that all houses in Improvement Areas have been declared unfit for human habitation. The case is quite strong enough without such twisting. The pamphlet goes on to give corresponding figures in respect of people in such areas and then says, "one out of every five persons is living under conditions condemned for human habitation." The same error vitiates the final calculations of the extent of the shortage. Unfortunately the real number of houses declared unfit in the Improvement Areas is not available.)

Infantile Mortality

Death Rate per 1,000 children under 12 months

	Stoke	Large Towns	England & Wales (approx.)
1924 ..	101	80	75
1926 ..	101	73	70
1928 ..	87	70	65
1930 ..	70	64	60

The figure of 70 shows a remarkable decrease, but is still 6 above the average for large towns—also, it is a figure for the whole city, which obscures the terrible facts brought out in the following table.

Death Rate per 1,000 Children under 12 months, Stoke

	Three Worst Wards			Three Best Wards		
1924–28 ..	115	122	132	64	74	82
1928–30 ..	128	133	138	53	69	67
Differences	+13	+11	+6	−11	−5	−15

Death Rate per 1,000 Children under 12 months, Stoke, Three Clearance Areas Contrasted with the City as a Whole

Three Clearance Areas					
John Street, Longton	Hill Street, Stoke.	Ashley Street, Hanley	Average for three Clearance Areas	City as a whole	Percentage of Clearance Areas above City as a whole
221	173	180	193·3	97	87%

The general improvement in the rate is therefore due to the best areas improving rather more than the worst areas are deteriorating. The tendency for the rate to increase still prevails in the bad areas.

Tuberculosis

During the last 12 years the mortality rate from non-pulmonary tuberculosis has actually *increased* slightly (1930 rate 1·25 per 1,000), while in the country as a whole it has been *halved.*

Health of Children and Others

School Medical Officer of Health: "This burden of disease, that is cast year after year upon Local Authorities, indicates that while some are of a nature that can easily be remedied, many of them occur in combination in such a way as to show that the constitutions of these young children have been seriously undermined."

1930: 23·7 per cent. of school children examined on starting school needed treatment.

Below is a table similar to the one above except that the three Clearance Areas are not shown separately.

Birth and Death Rates, excluding Infantile Mortality Rate (See Above)

1927–9 Per 1,000	Average for Three Clearance Areas	City	Percentage of Clearance Areas over City
Birth Rate ..	29	19·9	46%
Death Rate ..	18·8	13·4	32%

What Has Been Done

Stoke is steadily losing ground against the growth of population, apart from its lack of action in regard to slum clearance.

500 houses per year required for increase in population only.

Shortage by 1920 therefore 2,500 and requirements since 1920, 6,000.

Houses provided, 4,589 (2,528 by Corporation and 2,061 by private enterprise).

The shortage now is about 4,000.

("Common experience," married people after 10 to 15 years married life who have never had a house.)

The 2,000 houses built by private enterprise have been almost all for sale, ranging between £450 and £1,000—these are not "houses for the working class."

The houses built by the Corporation can be analysed as follows:—

Addison Act, 545 houses built, inclusive rent 12s. 4d. to 19s. 1d.

Chamberlain Act, 124 houses built, inclusive rent 11s. to 15s. 8d.

Wheatley Act, 2,119 houses built, inclusive rent 11s. to 15s. 8d.

Greenwood Act, 17 houses built, inclusive rent 10s. 9d. to 12s. 7d.

Massey Square Improvement Scheme, 83 houses built, inclusive rent 9s. 11d. to 13s. 6d.

Despite these high rents, the houses are, of course, a charge on the rates every year until the capital charges are paid, this charge has amounted to £2,000,000 so far. The City cannot afford to do what is necessary: there is no doubt of the truth of the statement in regard to this particular town.

Since the war, only one scheme covering 83 houses has been carried through *in connection with slum clearance,* i.e., the Massey Square, Burslem, scheme.

Two-thirds of the inhabitants of the 90 houses in the area were transferred to Corporation houses; about one-third of the condemned houses are still occupied owing to the difficulty of getting some of the old inhabitants out.

An attempt was made as far back as 1929 to deal with the John Street, Longton, area. An unfavourable legal decision in a similar case caused abandonment of the plan. Under the 1930 Act this area can be dealt with, and it is going to be dealt with! (Latest news.)

The Corporation's Five-Year Programme under the 1930 Act

Number of Houses to be demolished 1,800	Clearance Areas ..	1,000
	Improvement Areas—	
	For opening the area ..	200
	Unfit houses	200
	Individual unfit houses ..	400
		1,800
Persons to be displaced 11,000	Under above schemes ..	9,500
	Abatement of over-crowding in houses not affected by above ..	1,500
		11,000

Number of houses to be repaired under Part II, 3,750.

The Corporation provide for building 4,000 houses in five years and expect private enterprise to supply another 1,500.

Presumably the latter will all be for sale.

Of the 4,000 to be built by the Corporation, 2,000 are to be for rehousing and 2,000 for new needs.

New needs are 500 a year, so they will probably be a little further behind after another five years.

As stated above, the actual number of unfit houses cannot be determined.

The available information is:

Clearance areas contain 4,013 houses.

Improvement areas contain 4,572 houses.

This does not mean that 8,585 houses are unfit.

To obtain this number we have to add the unfit which are not in either Clearance or Improvement Areas, but subtract the fit in Improvement Areas. No figure is available, nor any statistical indication of how bad the Improvement Areas are, which would enable us to estimate the number in them which are unfit.

The pamphlet on which this investigation has been based either deliberately overstates its case or has fallen into an elementary trap. The concluding observations of its authors on total housing needs are thus rendered valueless.

It will be noted that in the "plan" the numbers of unfit houses to be demolished outside declared areas and the number of houses to be demolished inside Improvement Areas, per year, is the same, viz., 400.

If these figures represent similar proportions of the total needs of the City in these respects, the figure of 8,500, though built up wrongly, would hold.

On the above assumption, a large one, the following table represents the final position.

Unfit houses, all kinds ..	8,500
Present shortage	4,000
Requirements of population increase in 5 years ..	2,500
	15,000

"Five Year Plan," total, including private enterprise houses	5,500
Requirements in 5 years, still	9,500

(It would appear probable that the error involved by the above assumption will have the effect of making the position look worse than it is. It would be unlikely that the individual unfit houses would be as numerous as the fit houses in Improvement Areas.)

On the other hand the inclusion of the private enterprise houses makes the "plan" look better than it really is.

If these houses are excluded altogether, but the requirements per year figure is reduced to *400*, to omit the middle and upper classes on both sides of the picture, the table must be altered as follows :—

Unfit houses	8,500
Shortage	4,000
New requirements in 5 years	2,000
Requirements	14,500
Corporation only 5 Year Plan	4,000
Requirements in 5 years ..	10,500

Even this indicates that Stoke might be cleaned up and adequate housing provided for all in about 17 years.

It must be pointed out that the whole "plan" is qualified by the words "if land." Owing to the nature of the City, the creation of a satellite town, similar to Wythenshawe, has been suggested as the only solution.

A Clearance Order for John Street, Longton, area has recently been confirmed by the Ministry of Health. This Clearance Order provided for the demolition of approximately 150 properties, and the provision of 160 for rehousing the people living in them." *The rents of the houses so provided will be fixed according to the financial circumstances of the individual tenants.*"

Also "further slum clearance and improvement schemes are in contemplation." No scheme has been carried out during the past five years, though some individual demolitions under the 1930 Act have been, and have displaced and re-housed 40 families.

The whole "plan" above depends on land being available, and the absence of information on this point *may* mean that the "plan" will remain a plan indefinitely.

And how can the land be available ?

The City is confined by hills, so expansion is ruled out.

It is undermined by old pitshafts, so that large areas are unsafe.

Anyway building upwards would mean even more houses being inundated by smoke from factories. Stoke is the worst town for mixing of houses and factories.

CONCLUSION

If the Council built 4,000 houses per 5 years, it might make Stoke fit for habitation, but the new houses might, of course, fall through owing to the undermined condition of large areas. The creation of a satellite town would appear to be the only solution. It would involve enormous expense. But it must be remembered that the expense would not be as great as it would for other towns, because quite a large number of the tenants would be able to pay a respectable, if not full "economic," rent.

The immediate requirements of the City are 12,500 houses—on this basis.

Now let us try our mathematical line of approach.

5,323 people living over 3 per room (assume average 4 per room), have altogether 1,350 rooms. They should have 3,600, and therefore need another 2,250 if the rooms at present occupied are all fit to live in.

28,123 people living 3 and over 2 per room (assume average 2½) have 11,500 rooms. They should have 19,000, and therefore need another 7,500 if the present rooms are all fit to live in.

47,361 people living 2 and over 1½ per room (assume average 1¾) have 27,000 rooms. They should have 31,500, and therefore need another 4,500 if the present rooms are all fit to live in.

This gives a minimum of 14,250 rooms needed and a maximum, if all the houses at present overcrowded are unfit also, of 54,000. Adjustment must be made owing to the impossibility of housing everyone at exactly 1½ per room. It has been shown that in order that nobody shall live at over 1½, it may be necessary that some should live at only 1, 1¼ or 1⅓.

This consideration leads us to increase our maximum and minimum—so far as can be judged a 25 per cent. increase is not unreasonable—to 18,000 and 67,500.

The geometric mean of these two figures gives a figure of about 35,000 rooms required, or say, 8,000 houses.

This figure is low compared with the 12,500 arrived at by other means. Its lowness confirms the usefulness of our formula. In the case of Stoke an abnormal proportion of houses are insanitary—about 17 per cent. So that in any case a figure rather nearer the "maximum" would have been taken.

It may therefore be said that the two results confirm one another very closely, and also confirm the principle of using the geometric mean.

SUMMARY

The following figures represent the results arrived at from a consideration of the first six cities :—

Population 4,707,696.
255,625 living over 3 per room.
1,184,513 living over 1½ per room.*
252,000 rooms required merely to abate overcrowding at over 1½ per room.*
282,000 houses required altogether.

The analysis of Stoke gives the following results :—

Population 276,639.
5,323 living over 3 per room.
80,807 living over 1½ per room.*
18,000 rooms required merely to abate overcrowding at over 1½ per room.*
12,500 houses required altogether.

Total for Seven Cities

Population 4,984,335.
260,948 living over 3 per room.
1,265,320 living over 1½ per room.*
270,000 rooms required merely to abate overcrowding at over 1½ per room.*
294,500 houses required altogether.

POSTCRIPT

Since the above was written, the Corporation of Stoke-on-Trent has distinguished itself by being the first Council to present its Five Year Plan.

This plan provides for the clearance of 25 areas in all parts of the City, as follows :—

5 areas (including John Street, Longton; Hill Street, Stoke; and Ashley Street, Hanley) in 1933.
5 areas (including the Booth Street, Tunstall area, which involves over 2,500 people, and also the Tinkersclough, Hanley area, which was first condemned 25 years ago and closed for 13 years) in 1934.
4 areas in 1935.
6 areas in 1936.
5 areas in 1937.

It was agreed that clearance of the Tinkersclough area, which was flooded up to the height of some of the bedroom windows on June 22, should be expedited.

The total number of houses scheduled is 3,751, with a population of 18,619. 4,420 houses are to be provided over the five years, and the estimated cost is nearly £2,000,000.

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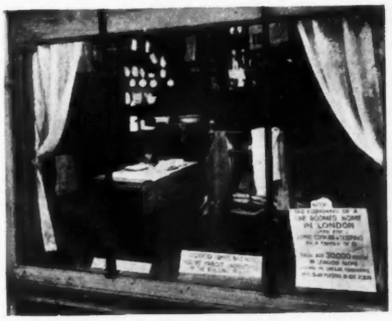
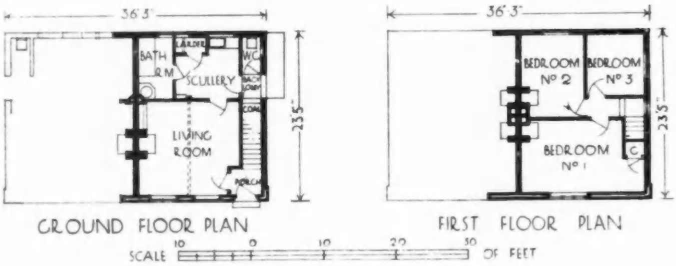
* Over 2 for Glasgow.



The Building Centre's window in Bond Street, dressed to show the living conditions of a typical slum family of six.

A GROUP OF COTTAGES AT WEBHEATH, WORCS.



GROUND FLOOR PLAN

FIRST FLOOR PLAN

This group of eight semi-detached cottages, intended for the accommodation of agricultural labourers, was designed by F. R. S. Yorke, and erected by the Bromsgrove Rural District Council in 1928 under the provisions of the Housing, etc., Act of 1923. The cost, which was, of course, one of the major considerations, was kept down to the minimum by the completest possible standardization of parts and by such material-saving features as the planning of one chimney to serve two cottages. The cost, as given below, is inclusive since the road was already existing.

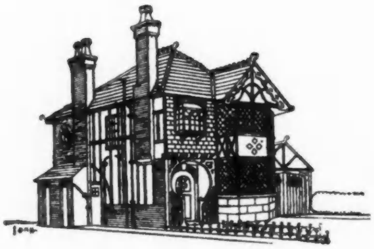
Site	..	*£223*	*1*	*8*
Buildings	..	*3,005*	*0*	*4*
Sewers	..	*11*	*12*	*6*
		£3,239	*14*	*6*

Weekly rent 10s. 6d. inclusive.

The cottages are of brick—an 11 ins. cavity wall with a white cement wash. The roofs are of interlocking pantiles.

DESIGNED BY F. R. S. YORKE

WHAT IS TO BE DONE ABOUT



THIS?

[*In this article Mr. Sharp deals with the problems raised, from the point of view of town-planning and suburban amenities, by the widespread public preference for the detached or semi-detached form of house and shows how this preference has been fostered by the Garden City movement and the model town-planning clauses.*—Ed., *A.J.*]

16. The Gappy Layout

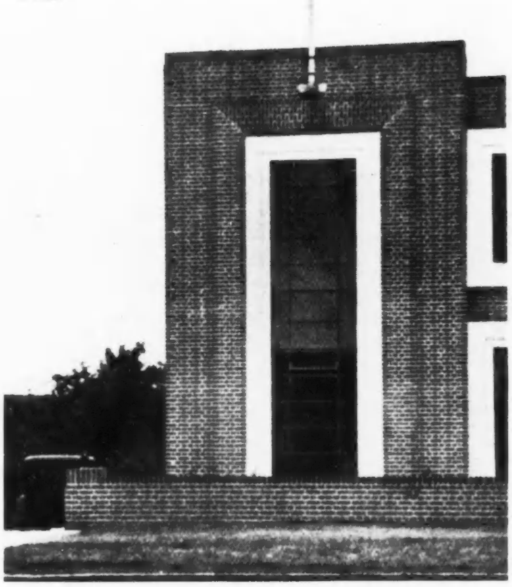
[*By THOMAS SHARP*]

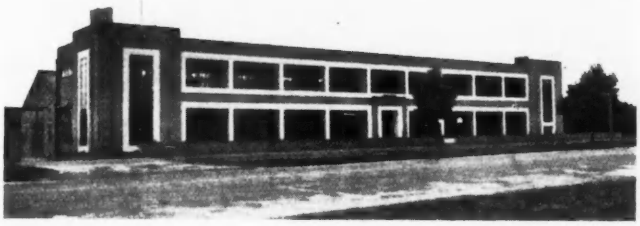
"ONE plus one plus one is not a formula with any kind of organic or artistic future," wrote an eminent critic recently. Nevertheless it is the formula on which our modern towns are being developed. Semi plus semi plus semi for as long as you like equals any present-day housing estate.

We all know how it began. The formula was advocated some thirty odd years ago with really serious artistic intentions. It was to lead to that ultimate beauty whose unreality and affectation was displayed in that inverted phrase one still sometimes comes across, "The City Beautiful," though it must be allowed in justice to the early prophets that they did not advocate the formula in all its splendid purity: they hedged a little, literally, and the formula became "one semi plus any number of trees, a privet hedge, perhaps even a curtain wall, plus another semi, etc., etc."

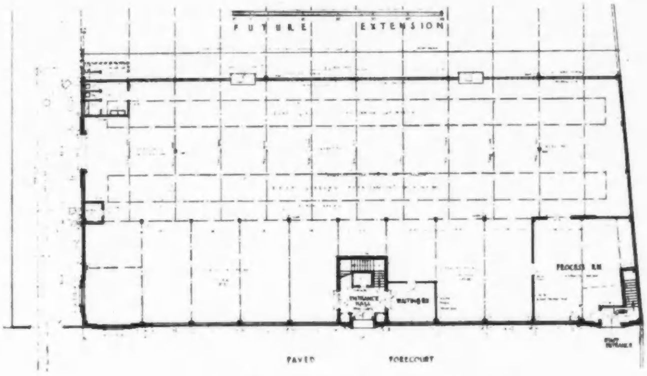
Today, despite the words of the eminent critic, and despite the occasional protest of some unromantic architect, the formula is universally regarded as the one formula for artistic success. Today, more than ever before, the "artistic" layout means the layout with semi-detached houses. It is "artistic" in reaction from the hated Byelaw street. And because in the Byelaw street (horrible thing that it was) civic design and large-scale architectural expression were

FACTORY AT BRENTFORD. BY H. CLIFFORD HOLLIS





This factory, for Messrs. H. G. Products Ltd., is the first part of a scheme for the development of an industrial site along the Great West Road at Brentford. It forms the western end of the lay-out and is of the usual light steel framed type, mainly on one floor, with offices on the first floor on the frontage. It is faced with multi-coloured red facing bricks with terra-cotta dressings.



GROUND FLOOR PLAN

debased out of existence, no one, prospective house-buyer, speculative builder, local authority, or any other, would today give two minutes' consideration to the proposition that, after all, the continuous grouping of square and terrace is the civilized method of building towns and suburbs (and even country villages), is the highest form of social expression, and is, too, amazingly enough, a real means of economy in these hard times.

For, of course, semi-detachment has long since acquired other justifications than that one of " amenity " which the original garden-city enthusiasts attached to it. Among these justifications (some of which Mr. Edwin Gunn has already set out in an earlier article in this series) are :—

(1) The supposed establishment of the householders' individuality : in some curious psychological manner semi-detachment appeals to middle-class personal vanity ;

(2) Convenience of approach to back premises for dustmen, tradesmen, gardeners and others ;

(3) Less subjection to annoyance from noise through thin party walls ;

(4) Space for a garage (of great social importance) ;

(5) Greater facility for lighting from the extra external wall.

But in point of fact this list of justifications (leaving aside the first, for what way is there of dealing with that kind of thing ?) is not so formidable as it may at first seem. Approach to garden and back door, and the partial avoidance of the horrors of thin party walls, for instance, can be obtained by the construction of tunnel passages between houses. This is quite an old practice. It was used a hundred years ago in the development of Lancashire towns ; it has been much used in post-war housing schemes. And there is nothing fundamentally offensive about it.

The other two advantages of detachment are much more real, but they are over-emphasized. There are, for example, many distinct public advantages (if private disadvantages) in the grouping of garages at the back of continuous building blocks ; the thousands of junctions of private carriage drives with the public streets are both dangerous and costly. And, anyhow, garages might well be incorporated in the general house-blocks. And as to the advantage to internal lighting, that is merely a question of planning.

Further, to set against these advantages there are distinct economic disadvantages. The exposed gables of semi-detached houses, and their generally hipped roofs, are obviously more expensive than the party walls and continuous roofs of terraced houses ; and the 6 ft., 10 ft., 20 ft. gap between houses adds a nice little figure to street charges, fencing costs, land costs, and so on. If these matters of £ s. d. were made clear to the public would it still remain semi-detached to a man, as we are told it is ?

Quite likely it would. It will require a complete revolution in taste to get back to Civic Design. And the question at the moment is : What is to be done about this way in which bad building is given its worst possible setting ?

There are a few things that might be done. Most of them are so obvious and so elementary that it is rather extraordinary that builders are still able to sell their houses without paying any attention to them. It is probably too much to ask an estate developer to arrange his plots and his buildings so that he will get an adequate terminal and not a cock-eyed gap at the end of his streets and culs-de-sac. But *does* the owner of the average house on the average building estate really enjoy looking out of his front window through the gaps between the opposite houses on to another man's back premises ? If the gap must continue to be the principal feature of English housing, surely it can be organized. It is surely elementary that if we must have gaps and houses, houses should face houses and gaps face gaps. Horrible as it may be to see one's own "attractive villa" reflected on the opposite side of the street as in a mirror, it is probably preferable to looking, even through a dilapidated trellis, at the dustbins, the drying underclothes, the cabbage stalks and the chicken runs across the way, and at the exposure of back elevations away beyond that (though the whimsically-minded might argue that this preference for the plain functional back as against the gable-garnished Tudor front may be a sign of a not altogether hopeless architectural taste !).

Worse than the ill-arrangement of gaps is the layout which at the flank ends of streets gives houses in a cross street a whole long vista down back gardens, or makes houses in culs-de-sac face immediately on to back premises. That is the kind of thing that was common in backward mining districts half a century ago. Even then it was deemed barbarous. Yet here it is on today's romantic town-planned estates. One would think the public would jib at that kind of "amenity." But no, the houses sell like hot cakes.

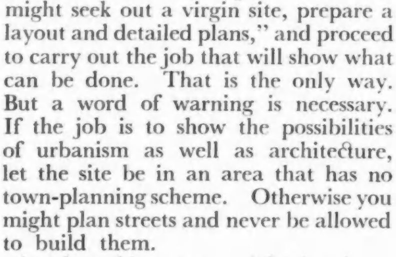
What is to be done about that ? To be quite frank, it is no use pretending that the speculative builder's layouts are much worse than those of many municipal or other housing estates. Indeed the "free" estate, which sometimes contains good architected buildings, is generally worse in layout than the speculative builder's. But the unorganized gap and the back-to-front cul-de-sac flourish at Welwyn as elsewhere. Yet there is more nominal control over these than over most other features of the housing estate. Town-planning authorities may have had difficulty in getting control of elevations, but no one has ever complained that their powers of control over layouts are insufficient. Indeed, from the little attention town-planning authorities pay to them, these stupidities would seem to have their approval.

But, of course, town-planning itself is largely to blame for modern standards of layout. The position is that while it may prevent the worst features (but generally doesn't), it actually compels the general principle of the gap, and makes illegal any attempt at large grouping. Consider, for example, these provisions of the model town-planning clauses : "Not more than eight (at most, it may be less) dwelling-houses shall be erected in one continuous block." That is the principle of the gap. "A dwelling-house or block of dwellings shall not be erected nearer than 6 ft. (at least, it may be more) to any other dwelling-house, or nearer than 3 ft. to any building other than a dwelling-house, or nearer than 3 ft. to the owner's boundary." The gap made trebly secure. "Not more than one quarter of the site may be covered by buildings, in the case of a dwelling-house over one story in height." This completely jiggers any attempt at a treatment of built-up corners, and so hurrah ! for the exposed back.

Thus while town-planning legalizes the bad it makes impossible the good. As one of many cases, there was an instance recently where a plan showing a small housing estate laid out in continuous development in street and square was deposited with a town-planning authority. A few fields away in an unplanned area exactly similar development had been carried out by the same architect—and very delightful development it was. But the town-planners swore a mighty oath and cried, "Away ! It doesn't matter about composition ; pleasant architecture is nothing. We must have gaps, and lots of them."

So what is to be done about it ? Mr. Edwin Gunn has already suggested "that a group of architects might seek out a virgin site, prepare a layout and detailed plans," and proceed to carry out the job that will show what can be done. That is the only way. But a word of warning is necessary. If the job is to show the possibilities of urbanism as well as architecture, let the site be in an area that has no town-planning scheme. Otherwise you might plan streets and never be allowed to build them.

Another thing, too, might be done. While the gap may still be officially blessed, compositional building might, at any rate, be made possible. Probably at this very moment the Ministry of Health officials are drawing up their new model clauses for schemes under the new Town and Country Planning Act. There is little doubt that these models will be pretty much the same as the present ones from which those restrictions cited above were taken. Would it not be a good thing, then, if a hundred or two architects one morning stormed the Ministry of Health and demanded at least a small chance for architecture—and urbanism ?



SCHOOL NEWS

THE BARTLETT SCHOOL OF ARCHITECTURE

The following awards have been made at University College, London, in the Bartlett School of Architecture :—

Entrance Exhibition : A. M. Foyle, Kingswood School, Bath.

Donaldson Silver Medal (awarded by the R.I.B.A.) : G. A. Crockett.

Herbert Batsford Prize : E. H. L. Osman.

"Architects' Journal" Prize (for the best final design produced in the Day School by a 4th Year Degree or Diploma Student): Esther M. Hamp.

"The Builder" Prizes (for the best sets of measured drawings of old work)—Senior : V. Bulbulian and G. A. Crockett (equal) ; Junior : D. W. Aberdeen, R.W. Cave and W. B. Galloway (equal).

"Building" Prize (for best set of drawings, combining construction and design, by a 4th Year Student) : V. Bulbulian.

Prize for Design in Ferro-Concrete : 1st, E. C. O'Farrell ; 2nd, A. P. Ciregna (divided).

Architecture Atelier : Bossom Silver Medal : E. C. O'Farrell ; Bossom-Davis Silver Medal : E. C. O'Farrell.

The following have obtained the Diploma in Architecture :—

P. B. Dunham, J. R. Hilton, M. Maung, N. F. Sanders.

The following have obtained the Certificate in Architecture :—

G. I. Goulden, A. J. Prior, J. Y. T. Stoneham, H. Watson.

The following have obtained the Certificate in Decoration :—

Dorothy V. L. M. Cargill, Joyce M. Coates, Joan D. F. Hey, Kathleen M. A. Roberts, A. C. Wilce.

The following have obtained the Certificate in Town Planning :—

R. T. Beck, I. Caldwell, R. S. Colquhoun, Sylvia C. Gray, C. C. Handisyde, T. L. Marshall, E. C. Northover, D. R. Stark, E. L. Thompson.

THE WELSH SCHOOL OF ARCHITECTURE

The following awards have been made as a result of the Sessional Examinations at the Welsh School of Architecture, the Technical College, Cardiff.

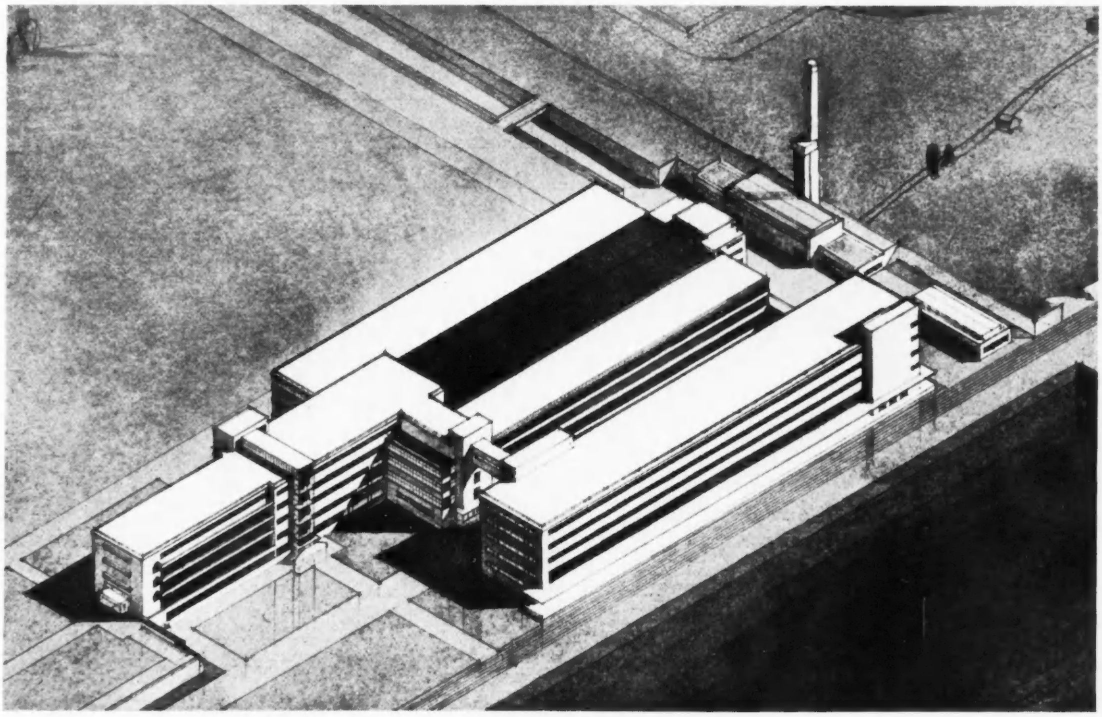
Professors L. B. Budden, M.A., A.R.I.B.A., and A. C. Dickie, M.A., A.R.I.B.A., are the external examiners.

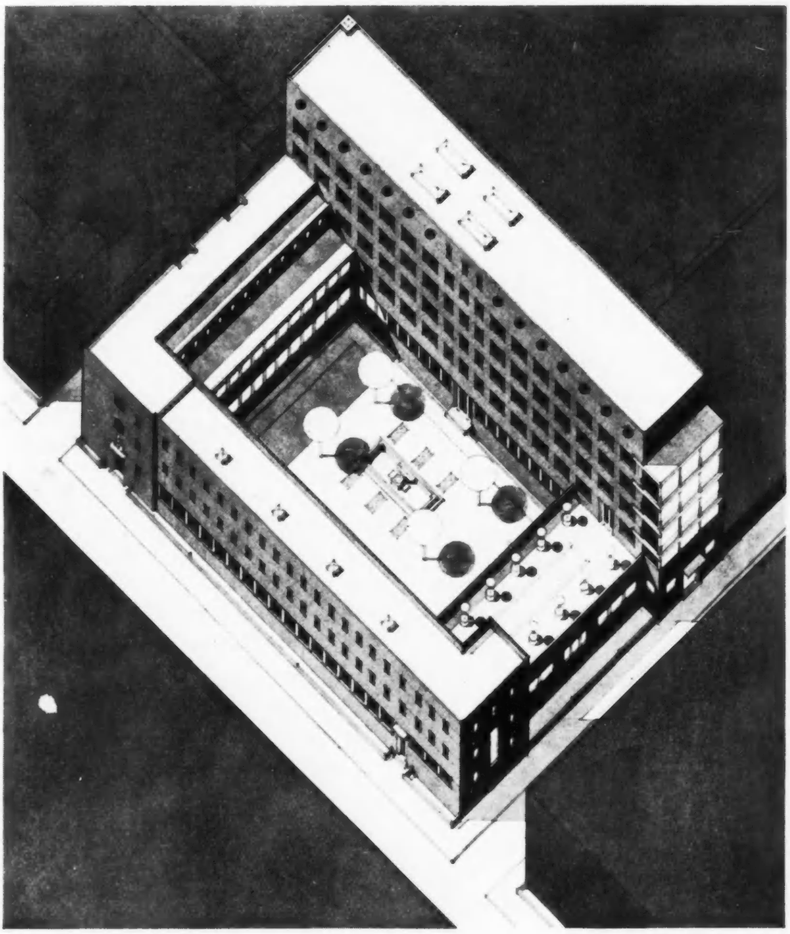
Fifth Examination for the Diploma awarded at the end of the five years' full-time course, exempting from the R.I.B.A. Final Examination, and acting as a complete qualification for registration under the Architects' Registration Act, 1931 :—

F. G. Allen (with distinction in Construction and Thesis), H. J. W. Lewis, (with distinction in Design and Construction and Thesis), S. G. Roberts, (with distinction in Design), Miss M. M. Baird, (with distinction in Thesis).

CHANGE OF ADDRESS

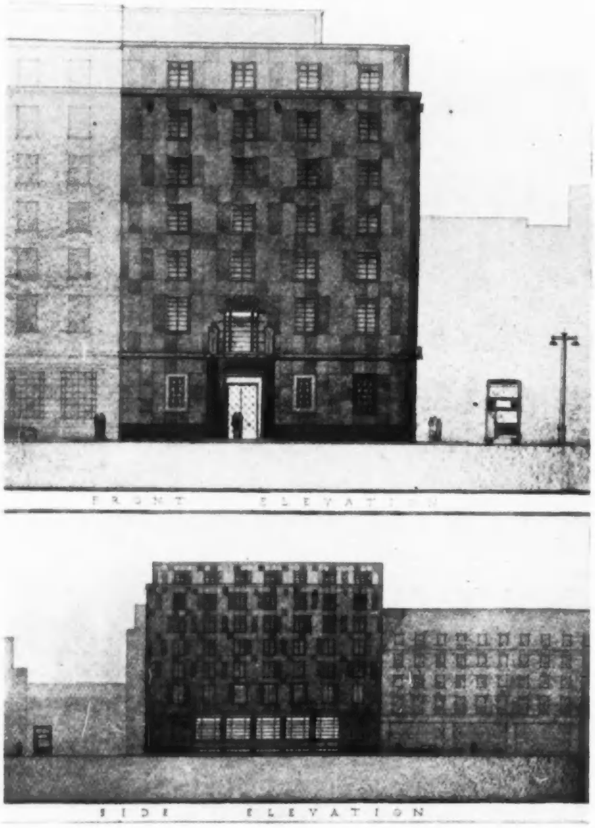
Mr. S. James Ainsley, Incorporated Quantity Surveyor, has removed his offices to 131 Baker Street, W.1. Telephone No. : Welbeck 7522.

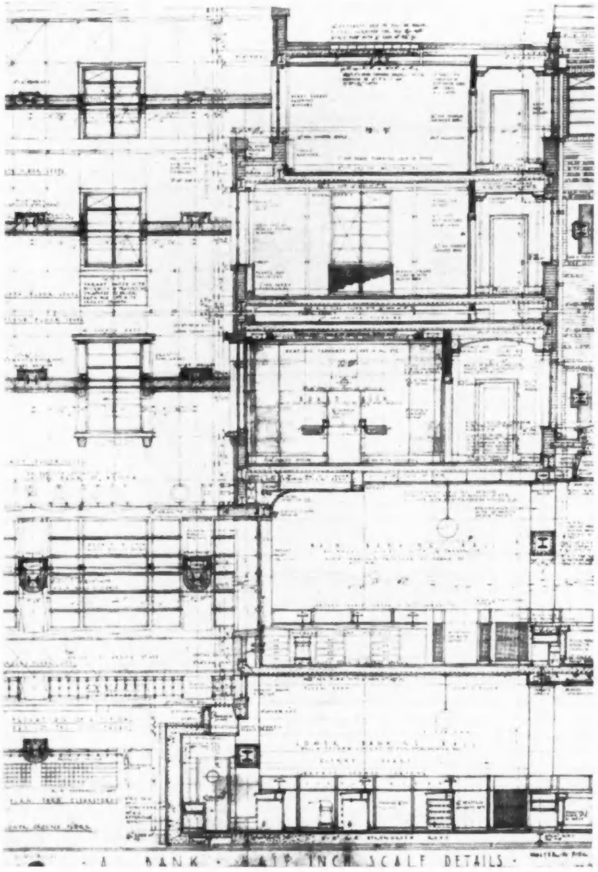


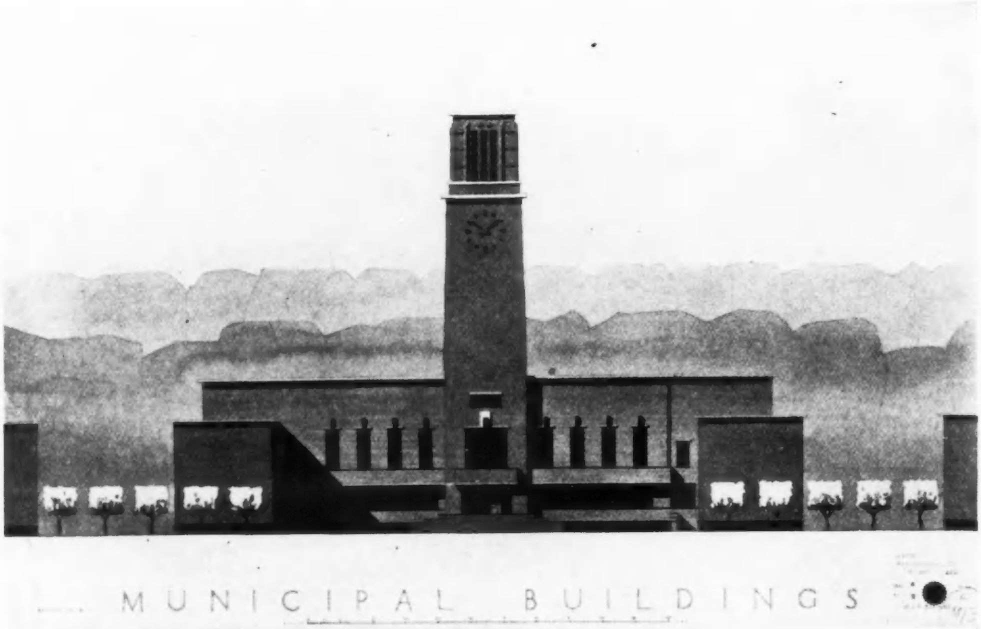


Two drawings of current work by students of the School of Architecture, Liverpool University. Top: Thesis design for a Tobacco Factory at Ellesmere Port, by H. J. Vincent. Bottom: Thesis design for a Medical Clinic and Nursing Home in Hope Street, Liverpool, by J. C. Edgar.

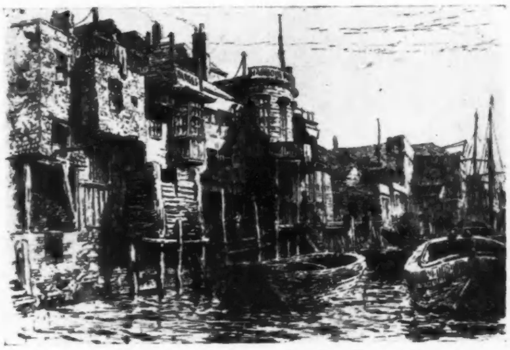
The new school buildings at Liverpool were opened last week, and an exhibition is being held of work by past and present students.


FRONT ELEVATION
SIDE ELEVATION


A BANK · HALF INCH SCALE DETAILS ·


MUNICIPAL BUILDINGS

Three drawings from the current exhibition of students' work at the Architectural Association. Top: Design for a Bank and working drawings of the same building, by W. H. Fisk, 5th year. Bottom: Design for Municipal Buildings in a Seaside Town, by M. J. H. Bunney, 4th year.



River Front at Limehouse. By Sir Ernest George.
[*From* TOURING LONDON.

LITERATURE

RURAL ENGLAND

Touring London with W. Teignmouth Shore. Batsford. 2s. 6d. *Touring England by Road and Byway.* Sydney R. Jones. Batsford. 5s. *Old Crosses and Lychgates.* Aymer Vallance. Batsford. 12s. 6d.

URGENT economic stress has made it advisable for England to be subjected to an intensive publicity campaign just now ; the foreigner must be enticed across the channel, and the wanderlust of the Briton directed towards discoveries within the limits of this island. This is probably one of the reasons why numbers of new books about the countryside are jostling and crowding one another in the booksellers' windows. These three, one about London, one about the highways and byways, and one about a characteristic feature of rural architecture, old crosses and lychgates, are re-issued by Messrs. Batsford at very reasonable prices. They are illustrated by old prints, drawings and photographs, showing how easy it is for swans to turn into ugly ducklings.

Three more voices to swell the surging chorus in praise of England. Can we be surprised, when we see how dangerous a firebrand it is, that " enthusiasm," until the nineteenth century, was regarded as a suspicious manifestation, near akin to madness ? Then, however, it took its place among the virtues, and it cannot be mere coincidence that at this time the destruction of the countryside began.

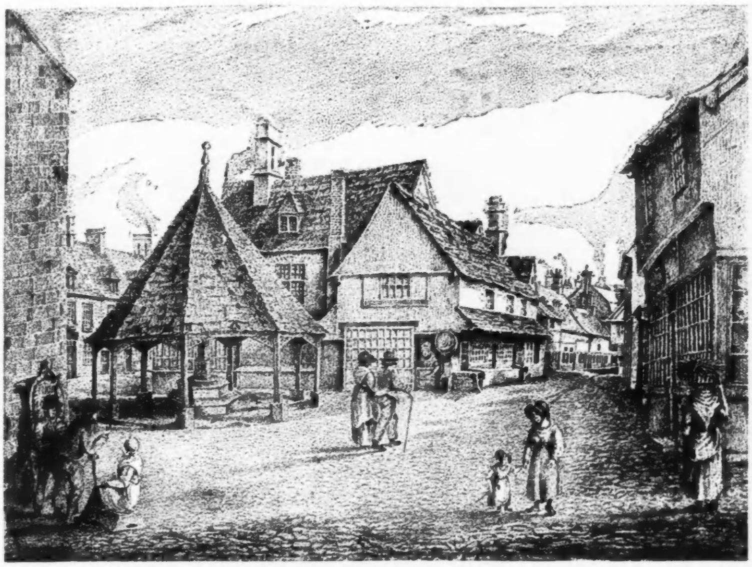
London was the first to suffer. It is impossible to realize that once upon a time, while still being the world's chief city, and a busy maritime centre, it had the dignified beauty which is now found only in parts of Oxford and Cambridge, and in some of the smaller country towns, as well as the rustic charms which are illustrated above. Mr. Shore, however, is so preoccupied with his gentle ghosts, and his dreams of old London, that he fails completely to point out that the terrible ghouls of avaricious industrialism now walk through the streets, and it is fast becoming a nightmare city of noise and bad taste.

In the same way the other two books present a false picture. *Old Crosses and Lychgates* (first issued, however, in 1920, when the case was not quite so desperate) is a scholarly and comprehensive work, but there is no more effective way of blinding the eye to unseemly activity than to direct its attention to microscopic study. In *Touring England*, the reader is guided sedulously away from the main routes through the countryside ; the author knows too well that they have already been devastated by get-rich-quick enterprise, but he does not mention that even in the smaller villages and roads it will soon be impossible to see the view for the hoardings.

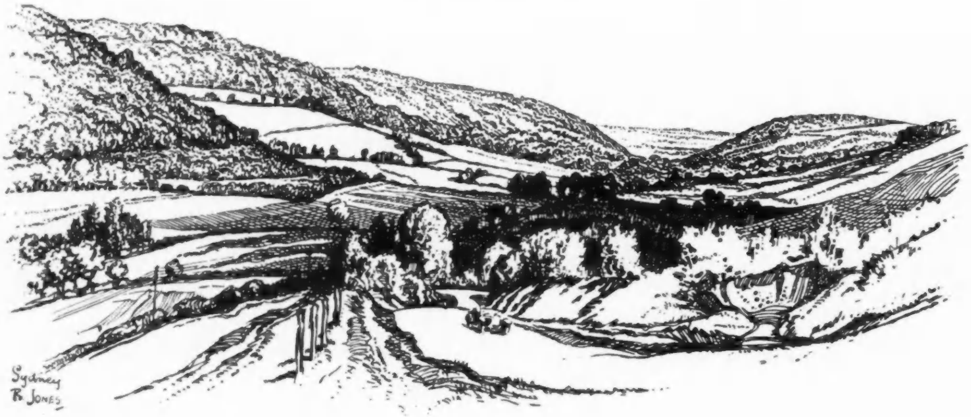
There is no time for indulgence in a romantic " escape from reality " ; no time to sink into a complacent apathy and rest on our oars to admire the remaining scenery, when we are being swept, all too rapidly, towards a dangerous weir.

Unfortunately, it is the beauty of the countryside which is its undoing. Within the last few years alone, the number of villages which have been desecrated by the visits of enthusiastic tourists reached very disturbing figures. The natives are only too ready to barter their natural resources for some easy money, and in the space of a few weeks asbestos and corrugated iron " amenities " spring up to meet the need for increased accommodation. When shall we realize that the greatest delight of travelling is to make discoveries for ourselves, and to have the impression, even while we know it is a false one, that we have been where no one has been before ? But litter, telegraph posts, advertisements and petrol pumps state emphatically that a place is only awaiting a little more " development " before it becomes a really desirable residential area.

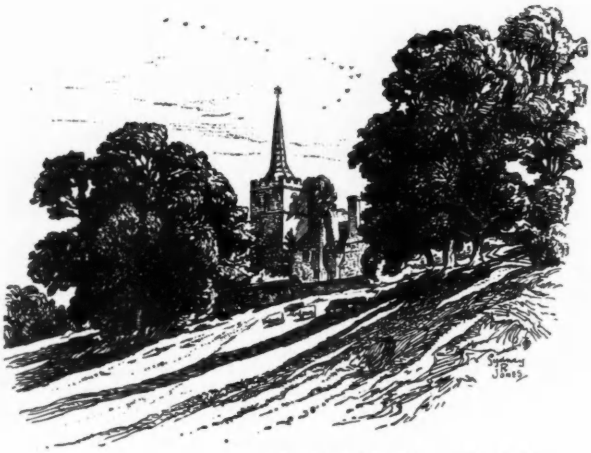
The countryman must be made to realize that if he is going to make a business of receiving tourists he must keep the countryside in a fit state to attract them, and the tourist, for his part, must not be too easily content, too thankful for that curve of the hill he can see between the water tower and the bus station. Humility is at best but a negative virtue, and belligerent activity is the only weapon now which



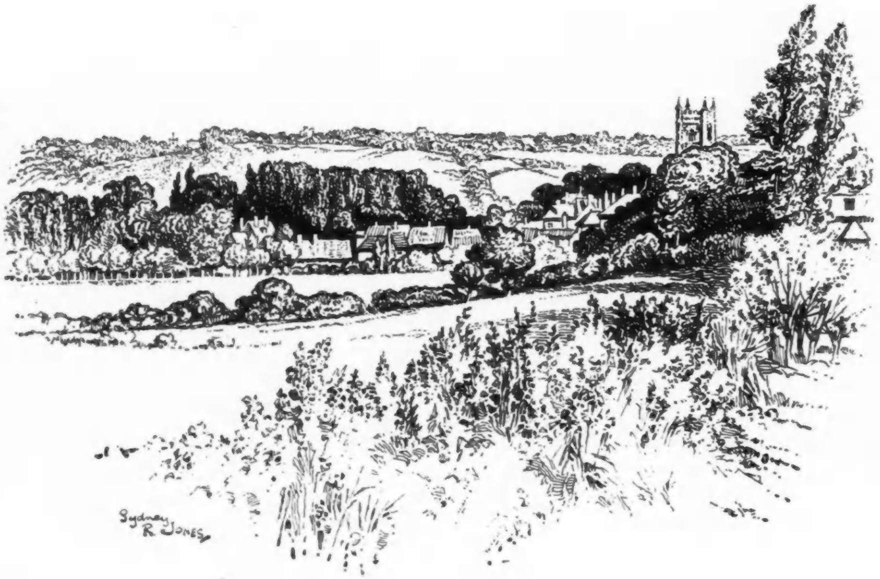
Oundle, Northamptonshire.
[*From* OLD CROSSES AND LYCHGATES.


Sydney R. Jones

The Chilterns at Fingest.

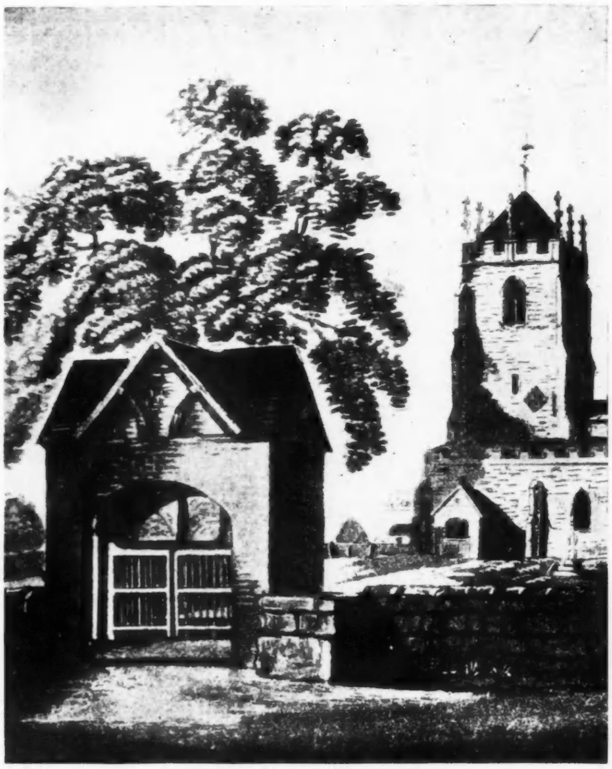

Sydney R. Jones

Hertfordshire Elms, Widford.

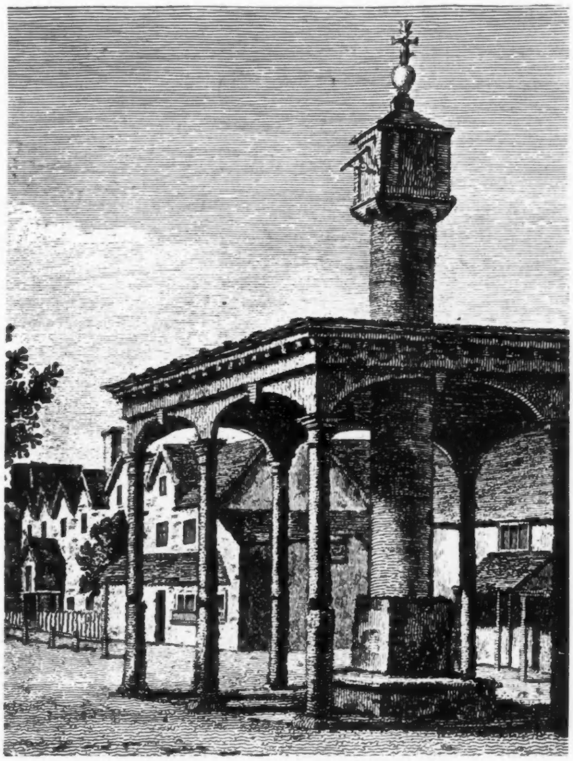

Sydney R. Jones

Stour Valley, Dedham.

[From TOURING ENGLAND.



Lychgate, Pattingham, Staffordshire.



Market Cross, Woodstock, Oxfordshire.

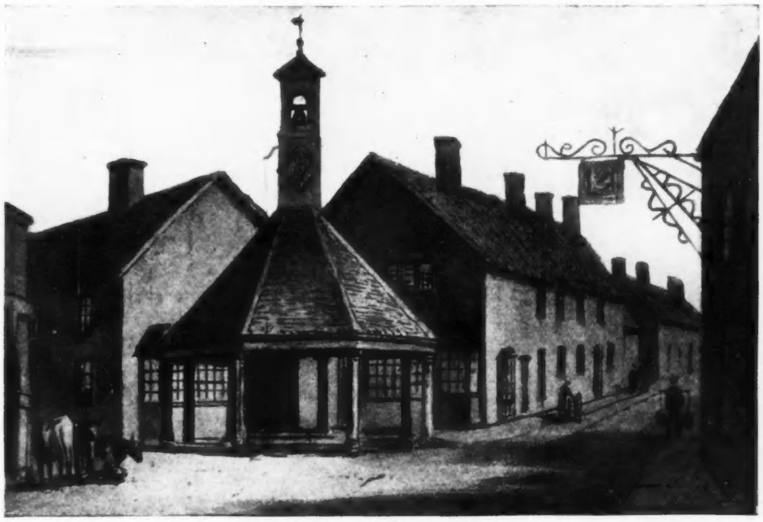
From OLD CROSSES AND LYCHGATES.

can save rural England. Much is being done, by such bodies as the C.P.R.E. and the National Trust, and the fight is slowly being won, but the slowness is such that when we have won the fight, there may be little left to preserve.

The English are reputed by the world to be lacking in artistic sense, and now is the time, when we are " at home " to visitors from other countries, to point out to them, with the discreet politeness of a host, that we are misjudged. Our three books help us to repudiate the opinion. They show that there is still no other countryside more beautiful than ours, and in an island of this size, most of it must, necessarily, be due, not to nature alone, but to cooperation between nature and man. As Mr. Jones says in *Touring England* : " Nowhere does the scenery show more happily the effect of the continuous work of man, and nowhere does man's handiwork blend more pleasantly with the natural countryside. Both landscape and architecture express with trim hedges and well-set buildings that strong and widespread, yet never tyrannical, sense of order that is characteristic of the people."

In this country it invariably happens, when an effort is made to save a picture, a building, or a fine landscape, that a thousand voices cry out that the saviour is an impractical idealist. They go on indirectly (for even the hardest head will not admit honestly that *money* is its first consideration) to show how much richer the country will be by the sacrifice, than it was before. So let us meet the business man on his own ground. Let us admit that we wish to exploit the countryside. During the year 1931–1932, about £15,000,000 came into the revenue from the holiday visits of tourists from other countries, and the figures for last year are larger still. What did they come to see? They came to see what England is famous for—ordered beauty and pleasing variety of scene—and when we lose our visitors, as we shall unless we keep our countryside decent, we shall lose, moreover, £20,000,000 a year.

B. S. HART



Nether Stowey, Somersetshire.

[*From* OLD CROSSES AND LYCHGATES.

QUESTIONS THAT ARISE

Comparative Costs of Coal and Oil for Heating

¶ J. G. writes: "*I shall be much obliged if you would kindly let me know if you have any statistics relating to the comparative consumption and costs of (a) coal-fed boilers; (b) oil-fed boilers. My clients are desirous of installing an oil-fed boiler in lieu of coal and are naturally anxious to ascertain the initial cost and ultimate costs of running.*"

Unbiased figures regarding the comparative consumptions and costs of (*a*) coal-fed boilers, (*b*) oil-fed boilers, are rare. Nearly all published compilations have as their object demonstration of the superiority of one or other system in preference to those of competitors. The most dependable method of arriving at the comparative values is to estimate the cost and thermal efficiency of each fuel under the conditions in question and make suitable allowance for their respective facilities. The reduction in firing attendance, which is associated with oil firing, has not always an economic value if the necessary labour for coal firing is already available. A fairly accurate estimate of respective values can be obtained by tabulating respectively for each method of firing the following particulars :—

1 : Cost of fuel per ton.
2 : Potential heat per ton in thermal units.
3 : Normal efficiency of firing.
4 : Capital cost of plant. (Approximately the same for each except for the oil-burning unit.)
5 : Depreciation of plant. (Approximately the same for each.)
6 : Labour cost for firing and attendance. (Heavier with solid fuel.)
7 : Cost of removal of ashes and refuse. (Only involved with solid fuel.)
8 : Value of rapid starting up and quick shutting down for idle periods. (A feature of oil firing.)
9 : Value of space required for fuel storage. (Smaller with oil fuel.)
10 : Value of the additional facility with which oil can be taken in for storage.

Taking the factors 1, 2 and 3 together, a primary comparison may be made between a coal of 14,000 B.Th.U. per lb. calorific value, coke of 12,500 B.Th.U. per lb., and fuel oil of 19,000 B.Th.U. per lb. First a correction of these heating values must be made for combustion efficiency. Coal and coke, badly fired, may show efficiencies under 50 per cent., but properly fired in a suitable boiler furnace they may well show 60 per cent.; while fuel oil can similarly fall well below the 80 per cent. claimed for some automatic oil fuel burning apparatus. The following may be taken as a more accurate relationship :—

Coal 14,000 B.Th.U.×60 per cent.= 8,400 B.Th.U. per lb.
Coke 12,500 B.Th.U.×60 per cent.= 7,500 B.Th.U. per lb.
Oil 19,000 B.Th.U.×75 per cent.= 14,250 B.Th.U. per lb.

The values based on potential heat, taking coal at 45s. a ton are thus about 40s. for coke and about 76s. 4d. per ton for oil fuel. Unless, however, the higher combustion efficiency is secured with oil, its value per ton must be set correspondingly lower.

Taking next the plant involved, the boiler and furnace cost may be set as the same for each. Oil fuel, however, requires, in addition, the complete burning unit, comprising motor, blower pump and atomizer, strainer, regulating valves, transformer for ignition, and controls with thermostats in the flue, if a completely automatic plant is required. These in one unit would cost approximately £70 to £80 for a boiler heat output of 500,000 B.Th.U. per hour, consuming about 35 lb. of oil per hour, or 1.6 tons per 100 heating hours. The corresponding consumption for coal would be 2.65 tons and for coke 2.98 tons, but an allowance should be made for extra fuel consumed by reason of slower starting up and waste fuel burned after the heating period is over. With normal care on the part of the fireman this allowance should not exceed 5 per cent., making the consumption about 2.8 tons for coal and 3.15 tons for coke. Comparative fuel prices would thus be :—

Coal 45s.×2.8 tons=126s.
Coke 40s.×3.15 tons=126s.
Oil 78s. 9d.×1.6 tons=126s.

It will be seen that at recent prices

OUR SECRETARIES

• 6 •

NORVAL R. PAXTON

WEST YORKSHIRE SOCIETY OF ARCHITECTS

MR. NORVAL ROWALLAN PAXTON, M.C., A.R.I.B.A., was educated at Paisley Grammar School and was articled in 1910 to W. D. McLennan, of Paisley, one of the disciples of the late Charles MacIntosh. His further architectural studies were made under the direction of Mr. A. Graham Henderson and at the Glasgow School of Architecture.

After a period in the office of Messrs. Thomson and Menzies, he joined the staff of Messrs. Watson and Salmond, FF.R.I.B.A., on the Glasgow municipal buildings extension in 1914.

Disabilities as a result of war service resulted in Mr. Paxton leaving Glasgow in 1920 to join Messrs. Sandy and Norris, FF.R.I.B.A., of Stafford, where he acted as chief of staff.

In 1921 he joined the staff of Messrs. G. Frederick Bowman and Son, of Leeds, as manager, until 1929, when he started practice on his own account. In 1930 he took into partnership Mr. H. Erskine Hill. He was elected an Associate of the R.I.B.A. in 1922.

Mr. Paxton's interest in the West Yorkshire Society of Architects dates from his arrival in Leeds, and the outlet for such interest has been provided by his election as Assistant Honorary Secretary in 1930, and to the Secretaryship in 1931.

fuel oil was competitive with coal and coke, except in cases where these fuels could be bought cheaply: for the additional capital cost of oil-burning equipment is more than offset by labour saved in firing and attendance, where that has to be employed specially for the purpose. With the proposed new tax on oil, however, coal or coke would be more economical, particularly where firing can be made a part-time duty of labour which is available for other duties. Without fuller particulars of the case in view it is not practicable to give a closer comparison of the actual costs of the two systems of firing.

A. H. H.

LAW REPORT

ALLEGED BUILDING SCHEMES

Woods and Others v. Gregory.—King's Bench Division. Before Mr. Justice Mackinnon.

THIS was an action by Mr. E. F. Woods, Mr. G. T. Chapman and Mr. S. E. Ellis, of Sharp's Lane, Ruislip, against Mr. W. J. Gregory, of Northolt Road, Eastcote, builder, to recover damage for alleged breaches of contract and of covenant, and alleged nuisance, and for an injunction to restrain the defendant from continuing acts of which complaint was made.

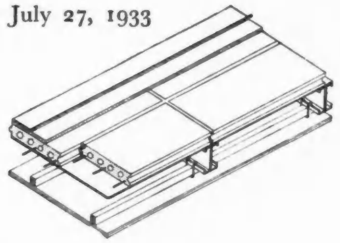
Defendant by his defence denied the plaintiffs' allegations.

Mr. Van Oss, for the plaintiffs, said their case was that the defendant's purchase of land at Ruislip for building purposes was subject, by reason of a building scheme created by the defendant's predecessors in title, to restrictive covenants for the preservation of the amenities of the estate. He erected certain houses, and plaintiffs said that when they negotiated for purchase the defendant promised to preserve the rural amenities.

Mr. Woods, Mr. Chapman and Mr. Ellis gave evidence in regard to the acts of the defendant, and further said that in breach of the contract defendant had erected more tennis courts on land at the end of their gardens, with the result that flooding of their gardens had followed. Complaint was also made of a pavilion which defendant had erected, used for dances and social events, and that it caused a nuisance.

Defendant gave evidence and denied that he gave the promises plaintiffs alleged or that his construction of the tennis courts had caused flooding of plaintiffs' gardens. The only matter mentioned, he said, was the open spaces at the back of the gardens, and that had not been spoilt.

His lordship came to the conclusion that there had been breaches of stipulations in the original conveyances, and in other respects. It was a breach to erect a pavilion, the noise from which amounted to a nuisance, and defendant's operations in connection with the additional tennis courts had been the cause of a nuisance. He granted the plaintiffs a declaration and an injunction, and damages to be reduced in the event of the defendant carrying out certain stipulations. Plaintiffs were given the costs of the action.



TRADE NOTES

BY F. R. S. YORKE, A.R.I.B.A.

Aluminium

THE architect will probably think there can be little that concerns him directly in a brochure entitled "Aluminium in the Gas Industry," but he will, I believe, find much interesting information on the metal itself in the first few pages of this latest publication of the British Aluminium Company.

●

Lightness, the outstanding characteristic of aluminium, impresses itself upon the mind to the exclusion, almost, of the other properties of the material; yet, in certain industries these other properties are of even greater importance than low weight, and quantities of the material are employed in the various branches of the gas industry because the metal is immune from chemical attack by most of the by-products of coal distillation and gas manufacture, and by the products of combustion of gas itself.

●

Some of the substances concerned have, I understand, a very pronounced action on other metals. Sulphur and sulphurous gases, such as hydrogen sulphide, have a serious corrosive effect on copper and brass; ammonia and ammoniacal liquors have a strong action on iron and steel; but aluminium can be used freely with such substances, without danger of rapid deterioration, on account of the formation of protective films. Thus, in the construction of various types of plant the use of aluminium is effective in avoiding frequent renewals and heavy depreciation.

●

The low specific gravity is also of importance in cases where portability or ease of handling, or low inertia is required, but this quality is of even greater value in its influence on cost.

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One ton of aluminium occupies three times the volume of one ton of brass; hence, although aluminium is more costly per ton, articles made of aluminium are often cheaper than similar articles made of brass. This applies also when aluminium is compared with other materials, and in fact, a greater thickness of aluminium may often be used economically in place of thinner sheets of other metals.

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Another characteristic of aluminium is its pleasant appearance and the facility with which it can be polished or give special surface finishes; by anodizing for instance.

●

The high thermal conductivity of aluminium is of considerable importance in industrial applications. Heat is transmitted through it at a rate which is four or five times as rapid as that at which it passes through iron or steel of the same given thickness; so that, used for boilers and ovens, aluminium can assist in obtaining fuel economy.

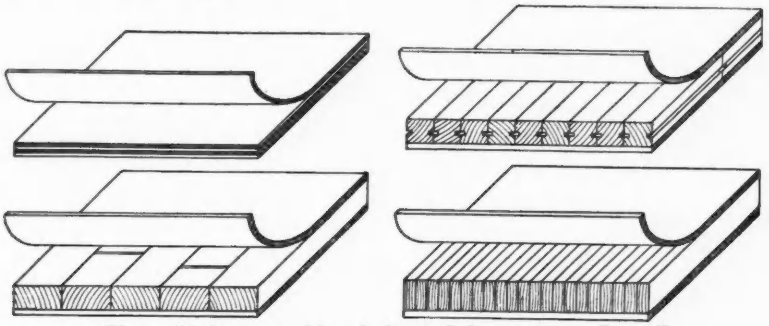
●

It is easily worked, and in its pure form is highly ductile and lends itself to the rapid production of stampings and spinnings; in an alloyed form it is easily cast and machined. It can be welded without difficulty, forged, drawn or rolled. All these characteristics make for cheapness in the cost of working the material.

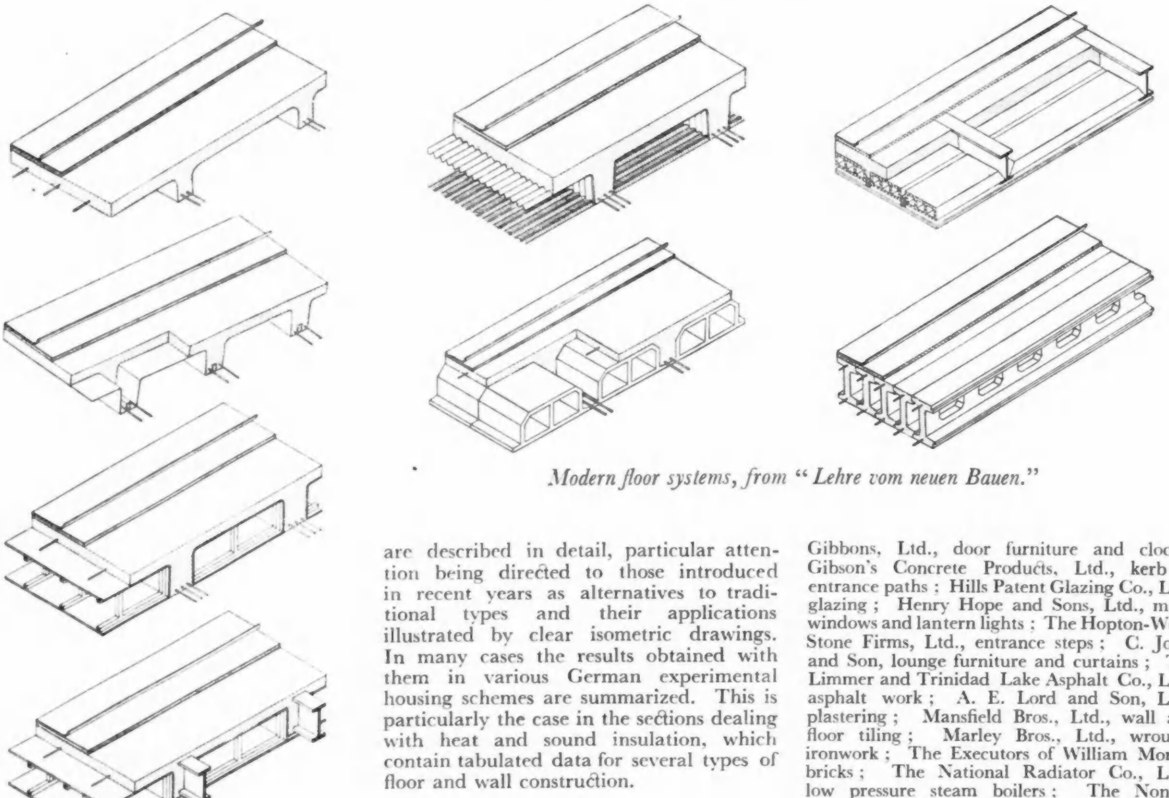
●

A Book on Modern Building Construction

There is clearly an urgent need in this country for a complete and up-to-date book—or series of books—on building construction, and a guide to new materials and building components. The standard technical works deal with the accepted traditional methods and materials which, though still in use, are gradually giving place to new ones, and I know of no existing book, in English, that supplies the information the architect requires



Types of built-up wood board, from "Lehre vom neuen Bauen."



Modern floor systems, from "Lehre vom neuen Bauen."

concerning the properties and applications of the many new products. Even though he retains and carefully files all manufacturers' catalogues, his source of information will still be incomplete, since manufacturers so rarely give the details upon which a proper knowledge of a product must be based, and in any case such a system of reference would be too cumbrous to be efficient, and the problem of indexing enormous. The only works I know, in English, that approximate to those required are the American Sweet's Catalogues.

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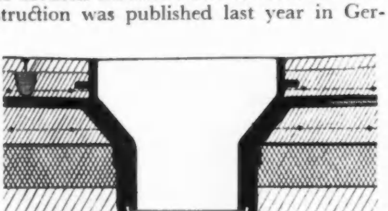
A comprehensive and detailed review* of modern materials and methods of construction was published last year in Germany. Under the headings: external walls, internal walls and partitions, floors and floor coverings, roofs, and heat and sound insulation; methods and materials are described in detail, particular attention being directed to those introduced in recent years as alternatives to traditional types and their applications illustrated by clear isometric drawings. In many cases the results obtained with them in various German experimental housing schemes are summarized. This is particularly the case in the sections dealing with heat and sound insulation, which contain tabulated data for several types of floor and wall construction.



Concrete flat with internal R. W. P., from "Lehre vom neuen Bauen."

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The properties and applications of such materials as cellular concrete, patent hollow tile and pre-cast beam floors, the new plastics, building board, plywood and metal trim are discussed, and in a concluding section there are lists of the principal materials, under headings, with names and addresses of manufacturers, data on composition, physical properties, methods of use, fire resistance and insulating qualities, and so on.

Literature Received

Home Electrical Appliances

B. T. H., Rugby

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Smethwick Baths (pages 105-108). General contractors, H. M. Nowell, Ltd; Z. D. Berry and Sons, heating plant; Thomas Glover, electrical installation; United Filters and Engineering, Ltd., filtration plant. Sub-contractors: The Acme Flooring and Paving Co. (1904), Ltd., lounge flooring; Bayliss, Jones and Bayliss, Ltd., outside railing; Beck and Windibank, Ltd., balcony seats and stage curtains; The Bersel Manufacturing Co., soap containers; Alfred Brown & Co., bronze lettering; Crompton Parkinson, Ltd., electric motors; Diespeker & Co., Ltd., terrazzo and composition flooring; Empire Stone Co., Ltd., reconstructed stonework; Evered & Co., Ltd., door furniture; William E. Farrer, Ltd., sanitary fittings; Francis Morton Junior & Co., spring installation to winter floor; General Electric Co., Ltd., electric light fittings; James Gibbons, Ltd., door furniture and clocks; Gibson's Concrete Products, Ltd., kerb to entrance paths; Hills Patent Glazing Co., Ltd., glazing; Henry Hope and Sons, Ltd., metal windows and lantern lights; The Hopton-Wood Stone Firms, Ltd., entrance steps; C. Jones and Son, lounge furniture and curtains; The Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt work; A. E. Lord and Son, Ltd., plastering; Mansfield Bros., Ltd., wall and floor tiling; Marley Bros., Ltd., wrought ironwork; The Executors of William Morris, bricks; The National Radiator Co., Ltd., low pressure steam boilers; The Nonslip Stone Co., "Nonslip" curb to bath; Pickerings, Ltd., hand power lift; The Rothervale Manufacturing Co., Ltd., timber and joinery; Scaffolding (Great Britain), Ltd., scaffolding; Shaw's Glazed Brick Co., Ltd., glazed scum channel; Smethwick Corporation Gas Department, gas fittings throughout; Smith's English Clocks, Ltd., electric clocks; W. Stevenson, towels and bathing slips; Stuart's Granolithic Co., Ltd., paving work; Tangyes, Ltd., pumps; Wallace and Tiernan, Ltd., chlorine and ammonia plant; Wall Bros., Ltd., chairs; Charles Wicksteed and Co. (1920), Ltd., diving stage, chute, and polo equipment; Charles Winn and Co., Ltd., shower fittings and mixing valves; David F. Wiseman and Sons, plumbing.

Factory for H.G. Products, Ltd. (page 115). General contractors, John Laing and Son, Ltd. Sub-contractors: Fleming Bros., steel works; Leeds Fireclay Co., terra-cotta; Limmer and Trinidad Asphalt Co., asphalt; Vulcanite, Ltd., flat roofs; Asbestos Cement Building Products, Ltd., big-six roofing; W. H. Heywood and Co., Ltd., patent glazing and lanterns; Haywards, Ltd., steel sliding doors; Comyn Ching and Co. (London), Ltd., heating installation, including the Robot Fireman.

Union Society's Premises, Cambridge (supplement). General contractors, Coulson and Son, Ltd. Sub-contractors: Moreland Hayne and Co., Ltd., steelwork; Henry Hope and Sons, Ltd., metal windows; Roneo, Ltd., steel bookstacks for stackroom; R. W. Steele & Co., oilfired heating, ventilating and plumbing.

In our list of sub-contractors for the Masonic Peace Memorial in last week's issue the following firms were omitted.—

Kerner-Greenwood & Co. Ltd., who supplied the Pudlo brand waterproofer, which was added to the structural concrete to waterproof all parts of the building below ground level, and was also used for waterproofing the reinforced concrete water-tanks.

Robert Adams Ltd., who supplied the door-springs throughout the building.

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* *Die Lehre vom neuen Bauen.* E. J. Siedler: Berlin, 1932. (Bauwelt-Verlag.) RM. 12.20

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

Plans passed by the ACTON Corporation: Shop, Willesden Lane, for Messrs. Davis and Knight; additions, factory, Old Oak Common Lane, for Messrs. T. P. Bennett and Son; alterations and additions, factory, Market Place, for Mr. G. Law; 64 houses, Noel Road, for Mr. T. Alwyn Lloyd; alterations and additions, factory, Vale Grove, for Mr. W. C. L. Carter; works extensions, Victoria Road, for Mr. R. H. Radburn; two flats, Shakespeare Road, for Mr. J. Wingrove; two houses, Rosemont Road, for Messrs. Cox and Hanshaw; engineering works Gunnersbury Lane, for Mr. H. Bailey; factories, various sites, Mr. F. E. Simpkins.

The L.C.C. is to provide rehousing accommodation on the Bate Place area, DEPTFORD, at a cost of £13,000.

Plans passed at EAST HAM: Alterations, 68-70, High Street, for Rego Clothiers, Ltd.; two houses, Eustace Road, for Mr. H. Joseph; 15 houses, Lawrence Avenue, for Mr. W. Edwards; additions, Trebor Works, Shaftesbury Road, for Messrs. J. C. Mellis & Co.; two shops, Romford Road, for Messrs. E. Fuller and Son; workshop and showroom, 607, Romford Road, for Mr. A. G. Young; alterations, 105, High Street, for Mr. R. J. Slater; additions to warehouse, Loders and Nucoline factory, Silvertown, for Mr. E. A. Bateman.

The HACKNEY B.C. has obtained sanction to borrow £81,500, for the erection of five-storey blocks, containing 200 tenements, at Lower Clapton Road.

The L.C.C. has granted permission to Messrs. H. F. Thoburn, Ltd., to proceed with the erection of 145 houses, and 142 garages, on the Manor Lane estate, LEE.

Plans passed by the LEWISHAM B.C.: Houses, De Frene Road, Forest Hill, for Mr. R. B. Rowell; additions, 130-134, Rushey Green, Catford, for Messrs. F. Woolworth & Co., Ltd.; parish hall, Trewsbury Road, Sydenham, for Messrs. Knapp-Fisher, Powell and Russell; additions, 37-39, Catford Hill, Catford, for Mr. S. F. Prior; alterations, 10-12, London Road, for Messrs. C. Barrett, Ltd.; 85 houses, Sevenoaks Road, for Mr. H. Macintosh; 152 houses, Bramdean Gardens, for Messrs. Chart, Son and Reading; six houses, Woodcombe Crescent, for Mr. F. G. Barnes; two houses, rear of Orchard House, for Mr. H. F. Ball; 14 houses, Allerford Road, for Messrs. A. J. Glock, Ltd.; seven houses, Brockley Rise, for Messrs. Wates, Ltd.; addition, Horniman Museum, for Messrs. W. H. Gaze and Sons, Ltd.; rebuilding premises, Morden Hill, for Mr. W. J. Turpin.

Plans passed at the LEWISHAM B.C.: Shop, Upper Colfe Road, Forest Hill, for Mr. E. Wilson; houses, Baring Road, Lee, for Messrs. Wates (Streatham), Ltd.; two houses, Peak Hill, Sydenham, for Messrs. Brett and Son; sub-station and buildings, Catford Hill, for South Metropolitan Electric Light and Power Co., Ltd.; nine houses, De Frene Road, for Mr. R. B. Rowell; addition, 109, Rushey Green, for Mr. G. T. Harman; four houses, Upwood Road, for Messrs. T. Allen, Ltd.; alterations, 37–39, Catford Hill, for Mr. S. F. Prior: shop, St. Margaret's, Southend Lane, Catford, for Mr. W. R. Hill.

The L.C.C. is to clear the Ranwell Street area, POPLAR, and erect tenements at a cost of £41,000.

SOUTHERN COUNTIES

Plans passed by DARTFORD U.D.C.: Four bungalows, Joydens Wood Road, for Mr. W. Kerslake: house, Stanham Road, for Mrs. E. Hulks; 13 houses, Cranford Road and Roseberry Gardens, for Mr. W. G. Cooper; 14 houses, Beaconsfield Road, for Mr. W. Kerslake; house, Priory Place, for Squire Construction Co., Ltd.

Plans passed by the HASTINGS Corporation: Extensions, off-licence Bohemia Road, for Mr. J. H. Howard, on behalf of Messrs. Watney, Combe, Reid & Co., Ltd.: three houses, Ashburnham Road, for Mr. J. Hunt; four bungalows, Hole Farm estate and nine houses elsewhere, for Messrs. Jeffery and Bowcock: additions and partial reconstruction, Yelton Hotel, for Messrs. Douglas Smith and Barley; 16 houses, Sedlescombe Road, etc., for Mr. J. S. D. Hicks; pavilion, Central Cricket Ground, for Mr. C. F. Botley; four houses, Hoads Wood Road, for Messrs. Oxley and Burleigh: four houses, Harold Road, for Mr. T. H. Roffe.

NEWPORT (I. o. W.) Corporation is considering the purchase of a site for the proposed new sewage works.

The PORTSMOUTH Corporation recommends a scheme for dealing with 12 slum areas at a total cost of £132,700.

MIDLAND COUNTIES

Plans passed by the BEDFORD Corporation: Additions, Bedford School, for Messrs. S. Foster, Ltd.; four houses, Talbot Road, for Messrs. Usher and Anthony; showroom, Tavistock Street, for Messrs. James Couper & Co., Ltd.; office, Park Avenue, for Mr. A. W. G. Prosser; offices, Lime Street, for Mr. W. E. G. Hull; alterations, 37, St. Peter's Street, for Mr. T. A. Gray; alterations, 21, Albany Road, for Messrs. Usher and Anthony; alterations and additions, 5A, Midland Road, for Messrs. J. Sainsbury, Ltd.

EASTERN COUNTIES

The COLCHESTER Education Committee has obtained sanction to borrow £9,115 for the erection of the first section of the proposed council school in Harwich Road.

Plans passed by the COLCHESTER Corporation: Almshouses, Military Road, for Mr. F. Stanley Daniel; three houses, Lexden Road, for Mr. C. R. Brown; reconstruction, 30, West Stockwell Street, for Messrs. A. E. Flory & Co.; premises, Northgate Street, for Messrs. Baker and Burton.

Plans passed by the LOWESTOFT Corporation: 10 bungalows, Kendal and Pakefield Road, for Mr. P. C. Easey: two houses, Walmer Road, for Mr. D. Dowell: four bungalows, Kirkley Run, for Mr. P. C. Easey; shop, Marine Parade, for Mr. J. Rout: shop, rear, 26, Marine Parade, for Mr. W. R. Openshaw: alterations to form shop, Kirkley Post Office, Carlton Road, for Mr. A. Castleton.

The Ministry of Health is to hold an inquiry into the proposal of the NORWICH Corporation, to erect municipal buildings at a cost of £222,000.

NORTHERN COUNTIES

Plans passed by the BLACKPOOL Corporation: Six houses, Sandicroft Road, and three houses, Montpelier Avenue, for Messrs. R. Fielding and Son; two houses, Antrim Road, for Messrs. C. and C. Hilton: 20 houses, Bloomfield Road, for Messrs. J. J. and S. Hayes, Ltd.; two houses, Maurice Grove, for Mr. G. H. Riley; two houses, Dunes Avenue, for Mr. A. Turner; four houses, Sunnybank Avenue, for Messrs. W. Brown and Son: two houses, Beaufort Avenue, for Mr. J. W. Lee: seven houses, Park Road, for Messrs. Ramsden Bros.; two houses, Alderley Avenue, for Mr. T. Foster: five houses, Andsell Road, and eight houses, Horncliffe Road, for Messrs. A. and G. R. Fletcher; four houses, Collingwood Avenue, for Messrs. Layton Hall, Ltd.: house and two shops, Anchorsholme Lane, for Mr. T. Fenton; 13 houses, Leaford Avenue, for Messrs. J. Fielding and Son; 13 houses, St. Martins Road, for executors of J. Birtwistle; two houses, Duchess Drive, for Messrs. T. Bannister and Son; three houses, Warbreck Drive, for Messrs. T. and D. Slater; eight houses, Stonycroft Avenue, for Mr. T. Midgley; additions, Queen's Drives and club house, Norbreck Road, for Cliff, and Norbreck Hydro, Ltd.; alterations, Promenade, for Blackpool Tower Co., Ltd.; two bungalows, Warley Road, for Wardley Estates, Ltd.; two houses, Queen's Drive, for Mr. P. Wood; 289 houses, Deneway Avenue, for Mr. A. Wilson and others; two houses and shops, Squires Gate Lane, for Lanes Construction Co.; four houses, Queensway, for Mr. J. Horrocks; estate lay-out, vicinity of Dutton Road and London Road, for Mr. W. Cardwell; twelve houses, new road at Staining, for Mr. E. Wright.

The LANCASTER Corporation has prepared a scheme for the provision of approximately 500 houses and flats on the Marsh estate for the accommodation of displaced tenants under slum clearance schemes.

Plans passed by ROTHERHAM Corporation: Kennels, etc., Steel Street, for Rotherham Greyhounds, Ltd.; two houses, Old Wortley Road, for Mr. R. Harrington; bungalow, Wortley Road, for Mr. G. Copley; two houses, Wickerlsey Road, for Mr. A. J. Pugh ; six houses, Bradgate Lane, for Mr. E. Ogley; house, Wortley Road, for Mr. F. W. Bennett; public house, Fitzwilliam Road, for Messrs. Tennant Bros., Ltd.

The TYNEMOUTH Corporation has approved a lay-out plan for the erection of municipal offices in Spring Terrace Field, at a cost of £125,000, and is to ascertain the possibility of obtaining a grant and requisite loan sanction.

The WORKINGTON Corporation is to prepare plans for the erection of 48 houses under the rehousing scheme.

SCOTLAND

Plans passed by the GLASGOW Corporation: Extension to Possilpark School, for the Education Committee; extension to offices, Lochburn Road, for Kelvin Construction Co.; alterations, lay-out of Cardonald housing scheme, for Glasgow Estates Development Co., Ltd.; shop, Clarkston Road, for Mr. J. M. Hamilton; shops, Paisley Road, for Galbraith's Stores, Ltd.; temporary school, Berryknows Road, for the Education Committee; workshop, Caperigg Street, Carnwadric, for the Corporation housing department; shop, Netherlee Road, Cathcart, for Mr. A. Clements; extension to sub-station, Hillington Road, Cardonald, for The Clyde Valley Electrical Power Co.; shop, Kennyhill Goods Station, for the Allen Construction Co., Ltd.; clubhouse, Culrain Street, for Shettleston Bowling Club; 12 houses, Altyre Street, for the housing department; extension to shops, Todd Street, for Mr. Benedetto Biello; alterations to shop, 1438-1442, Gallowgate, for The City Bakeries, Ltd.; alterations, Bankhead School, for the Education Department; footbridge and conveniences, 161, Netherton Road, for Messrs. J. and J. Neil (Temple), Ltd.

WALES

Plans passed by the SWANSEA Corporation: Meeting hall, Nichol Street, for the Christadelphian Society; two houses, Mansel Road, Bonymaen, for Messrs. J. S. L. Perry and M. Phillips; two houses, Dinas Street, for Mr. H. Morton; rebuilding, 261, Oxford Street, for Messrs. Fanbury; conversion of one house into two, Trallwyn Road, for Mr. T. Clement: eight houses, Mount Pleasant, for Messrs. Rogers and Davies; two houses, Llangyfelach Road, Clasemont, for Mr. D. A. Rosser; six flats, Glanmor Crescent, for Estateways, Ltd.; additions, 28, Jersey Road, for Mr. E. Walters; two houses, Druslwyn Road, for Mr. J. McGairl; eight houses, Townhill Road, for Mr. J. Willis; house and shop, Cockett Road, for Mr. Dd. Harry; house and petrol filling station, Station Road, Cockett, for Mr. W. R. Barlow; three houses, Norton Avenue, for Mr. B. F. Hoppe.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	Aberdare	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	Banbury	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B_3	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A_3	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A_1	Bristol	S.W. Counties	1 5	1 0¾
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A_1	Buxton	N.W. Counties	1 5	1 0¾
A_2	Cambridge	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A_3	Cumberland	N.W. Counties	1 4	1 0
A	Darlington	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
B_2	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	Eastbourne	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	Felixstowe	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	Gateshead	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	Halifax	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	Ilkley	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	Jarrow	N.E. Coast	1 5½	1 1¼
A	Keighley	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	Lancaster	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6¾	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	Macclesfield	N.W. Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	Nantwich	N.W. Counties	1 4½	1 0½
A	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	Oakham	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	Paisley	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	Queensferry	N.W. Counties	1 5½	1 1¼
A_2	Reading	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	St. Albans	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	Tamworth	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1 1¼
A	Tyne District	N. E. Coast	1 5½	1 1¼
A	Wakefield	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A_3	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	Yarmouth	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	"		1	7
Joiner	"		1	7
Machinist	"		1	8
Mason (Banker)	"		1	7
" (Fixer)	"		1	8
Plumber	"		1	7
Painter	"		1	6
Paperhanger	"		1	6
Glazier	"		1	7
Slater	"		1	7
Scaffolder	"		1	3
Timberman	"		1	3
Navvy	"		1	2½
General Labourer	"		1	2½
Lorryman	"		1	5
Crane Driver	"		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	"	1	16	6
Hydrated Lime	"	3	0	9
Portland Cement	"	2	6	0
Rapid Hardening Cement	"	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	"		7	6
Building Sand	"		7	9
Washed Sand	"		8	9
2" Broken Brick	"		8	3
¾" " "	"		11	6
Pan Breeze	"		6	6
Coke Breeze	"		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	"	3	6	5	3
Rest bends	"	4	3	6	3
Single junctions	"	3	6	5	3
Double "	"	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	"	4	6	6	6
Channel tapers	"	2	9	4	0
Yard gullies	"	6	9	8	9
Interceptors	"	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	"	9	0	15	0
Single junctions	"	8	9	18	0
Double junctions	"	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	"		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	"		0	0
Phorpres bricks	"	2	18	0
Stocks, 1st quality	"	4	11	0
" 2nd "	"	4	2	6
Blue Bricks, Pressed	"	9	2	6
" Wirecuts	"	8	2	6
" Brindles	"	7	6	6
" Bullnose	"	9	14	0
Red Sand-faced Facings	"	6	18	6
Red Rubbers for Arches	"	12	0	0
Multicoloured Facings	"	8	8	0
Luton Facings	"	8	0	0
Phorpres White Facings	"	3	17	3
Phorpres Rustic Facings	"	3	12	3
Midhurst White Facings	"	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	"	21	10	0
Headers	"	21	0	0
Bullnose	"	28	0	0
Double Stretchers	"	30	0	0
Double Headers	"	27	0	0
Glazed Second Quality, *Less*	"	1	0	0
" Buffs and Creams, *Add*	"	2	0	0
" Other Colours	"	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" " " "	"		1	10
3" " " "	"		2	1
4" " " "	"		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
" " Basebed	"	4	9
Bath stone	"	2	11
York stone	"	6	6
" " Sawn templates	"	7	6
" " Paving, 2"	F.S.	1	8
" " " 3"	"	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	"	24	10	0
20" × 10" Countesses	"	19	5	0
18" × 10" Viscountesses	"	15	10	0
18" × 9" Ladies	"	13	17	6
Westmoriand green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	26	0	0
" green	" "	27	15	0
Best machine roofing tiles	"	4	10	0
Best hand-made do.	"	5	0	0
Hips and valleys	each			9½
" hand-made	"			10
Nails, compo	lb.		1	4
" copper	"		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	" "			5
" " 2nds	" "			4
Mahogany, Honduras	" "		1	3
" African	" "		1	1
" Cuban	" "		2	6
Oak, plain American	" "		1	0
" Figured "	" "		1	3
" Plain Japanese	" "		1	2
" Figured "	" "		1	5
" Austrian wainscot	" "		1	6
" English	" "		1	11
Pine, Yellow	" "		1	0
" Oregon	" "			4
" British Columbian	" "			4
Teak, Moulmein	" "		1	3
" Burma	" "		1	2
Walnut, American	" "		2	3
" French	" "		2	3
Whitewood, American	" "		1	1
Deal floorings, ¾"	Sq.		19	0
" ⅞"	"	1	1	6
" 1"	"	1	3	6
" 1⅛"	"	1	7	6
" 1¼"	"	1	12	0
Deal matchings ⅝"	"		14	0
" ¾"	"		15	6
" 1"	"	1	4	0
Rough boarding ¾"	"		16	0
" 1"	"		18	0
" 1¼"	"	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1¼"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
" 3"-11½" long	"	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	"	11	1/3	2/2	2/10	5/3
" " 3"-11½" long	"	8	10	1/5	1/11	3/6
Bends	"	8	11	1/7½	2/7½	5/2
Springs not socketed	"	5	7	1/1½	1/11½	3/11
Socket unions	"	2/-	3/-	5/6	6/9	10/-
Elbows, square	"	10	1/1	1/6	2/2	4/3
Tees	"	1/-	1/3	1/10	2/6	5/1
Crosses	"	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	"	3	4	6	8	1/3
Diminished sockets	"	4	6	9	1/-	2/-
Flanges	"	9	1/-	1/4	1/9	2/9
Caps	"	3½	5	8	1/-	2/-
Backnuts	"	2	3	5	6	1/1
Iron main cocks	"	1/6	2/3	4/2	5/4	11/6
" " with brass plugs	"	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	" water	47½
Steam	57½	" steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	" water	42½
Steam	47½	" steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ⅜"	"	8	6
" " ½"	"	8	3
" " ⅝"	"	8	0
" " ¾"	"	7	6
" " ⅞"	"	7	6
" " 1"	"	7	6
" " 1¼"	"	7	6
" " 1½"	"	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	"	5	0	8	6
Boots	"	3	3	4	5
Bends	"	2	9	4	0
" with access door	"	—		6	9
Heads	"	4	0	5	0
Swan-necks up to 9" offsets	"	4	0	6	3
Plinth bends, 4½" to 6"	"	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	"	1	7	1	11
Obtuse angles	"	2	0	2	6
Outlets	"	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	2	0
" drawn pipes	"		19	0
" soil pipe	"	1	6	0
" scrap	"		14	6
Solder, plumbers'	lb.			10
" fine do.	"		1	0
Copper, sheet	"			10½
" tubes	"			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	"	1	1	1	3	2	8
Galvanized	"	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	"	3	9	5	3	10	3
Shoes	"	2	10	4	4	9	6
Heads	"	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	"	2	10	0
" fine	"	4	15	0
Hydrated lime	"	3	0	9
Sirapite	"	3	6	0
Keene's cement	"	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
" rent	"		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2½
" " 26 oz. " " " "	"					3½
Arctic glass, white	"					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	"					6½
¼" Hartley's rough rolled	"					7
¼" " wired cast	"					10
¼" Georgian wired cast	"					11
¼" Polished plate, n/e 1 ft.	"		†7½	to	‡1	0
" " 2	"		†10	"	‡1	3½
" " 3	"	†1	4½	"	‡1	10
" " 4	"	†1	11	"	‡2	4
" " 6	"	†2	3	"	‡2	7½
" " 8	"	†2	5	"	‡3	0½
" " 12	"	†2	10	"	‡3	3½
" " 20	"	†3	3½	"	‡3	9
" " 45	"	†3	6½	"	‡4	0½
" " 65	"	†3	11½	"	‡4	4
" " 90	"	†4	4	"	‡4	9
" " 100	"	†4	6	"	‡4	11
Vita glass, sheet, n/e 1 ft.	"				1	0
" " " " 2	"				1	3
" " " over 2	"				1	9
" " plate, n/e 1 ft.	"				1	6
" " " 2	"				3	0
" " " 5	"				4	0
" " " 7	"				5	0
" " " 15	"				6	0
" " " over 15	"				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	1
Boiled oil	"		2	3
Turpentine	"		4	9
Patent knotting	"		14	0
Distemper, washable	cwt.	3	0	0
" ordinary	"	2	5	0
Whitening	"		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	"		14	0
Outside varnish	"		16	0
White enamel	"	1	15	0
Ready-mixed paint	"		13	6
Brunswick black	"		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		Unit	£	s.	d.
Digging over surface n/e 12" deep and cart away		Y.S.		2	9
„ to reduce levels n/e 5′ 0" deep and cart away		Y.C.		8	6
„ to form basement n/e 5′ 0" deep and cart away		„		9	0
„ „ 10′ 0" deep and cart away		„		9	6
„ „ 15′ 0" deep and cart away		„		10	0
If in stiff clay	add	„		2	6
If in underpinning	„	„		4	0
Digging, return, fill and ram	„	„		4	0
Planking and strutting to sides of excavation		F.S.		1	0
„ „ to pier holes		„			5
„ „ to trenches		„			5
„ „ extra, only if left in		„			3
Hardcore, filled in and rammed		Y.C.		10	0
Portland cement concrete in foundations (6-1)		„	1	6	0
„ „ „ (4-2-1)		„	1	12	6
„ „ „ underpinning		„	1	16	0
Finishing surface of concrete, spade face		Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and gratings	„	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

	Unit	£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
„ „ in cement	„	29	15	0
„ Stocks in cement	„	35	15	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			5½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

	Unit	s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	„	6	9
¾" paving or flat	„	4	0
1" paving or flat	„	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

	Unit	£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

	Unit	£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	„	3	7	0
Do., 24" × 12"	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles	„	2	16	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

	Unit	£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" „ „ „ „	„	1	17	6
1¼" „ „ „ „	„	2	3	0
¾" × 2" fir battening for Countess slating	„		9	6
Do. for 4" gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" „ „ „ „ „	„		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	„	2	12	6
1½" do.	„	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1¼" do.	„		1	11

CARPENTER AND JOINER—*continued*

	Unit	s.	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" „ „	„	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	3	9
2" „ „ „	„	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" „ „ „	„	2	8
1½" „ but moulded both sides	„	2	4
2" „ „ „	„	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" „ „	„	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½" deal moulded wall strings	„	2	1
1½" „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" „ „	„	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

	Unit	£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

	Unit	£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	16	6
Do. in flashings		1	19	0
Do. in covering to turrets, etc.	„	2	6	0
Do. in soakers	„	1	12	0
Labour to welted edge	F.R.			3½
Open copper nailing	„			3¼
Close „ „	„			4½

		½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1¼" s.	1¼" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks	F.R.	1	0	1	2	1	5	2	1	3	0	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	3
Do. to stop ends	„		6½		8		9		11	1	3	—	
Boiler screws and unions	„	3	3	3	9	5	0	8	0	—		—	
Lead traps	„	—		—		—		6	3	8	9	—	
Screw down bib valves	„	6	9	9	6	11	0	—		—		—	
Do. stop cocks	„	9	0	11	0	14	6	20	6	47	0	—	

	Unit	s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

	Unit	£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	9
Do. vertical	„		2	3
Rough render on walls	„		1	4
Render, float and set in lime and hair	„		2	0
Render and set in Sirapite	„		2	2
Render, backing in cement and sand, and set in Keene's cement	„		3	1
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R.			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1" girth	„			1½
1" granolithic pavings	Y.S.		3	6
1½" „	„		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	„		17	6
9" × 3" „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

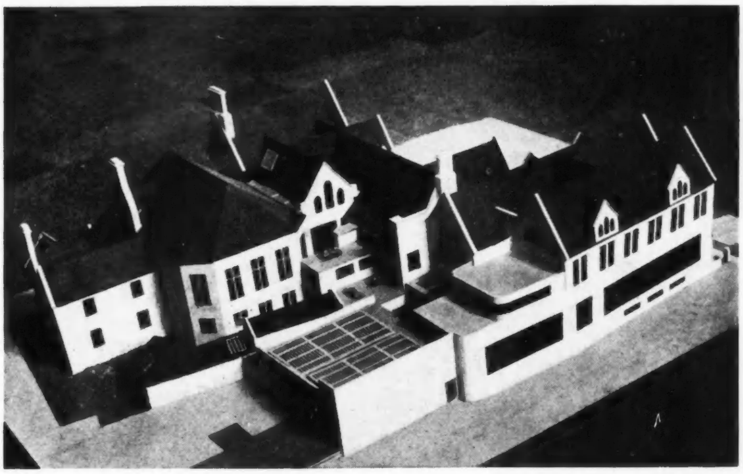
	Unit	s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

PAINTER

	Unit	s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	„	2	9

THE CAMBRIDGE UNION SOCIETY

DESIGNED BY HAROLD TOMLINSON

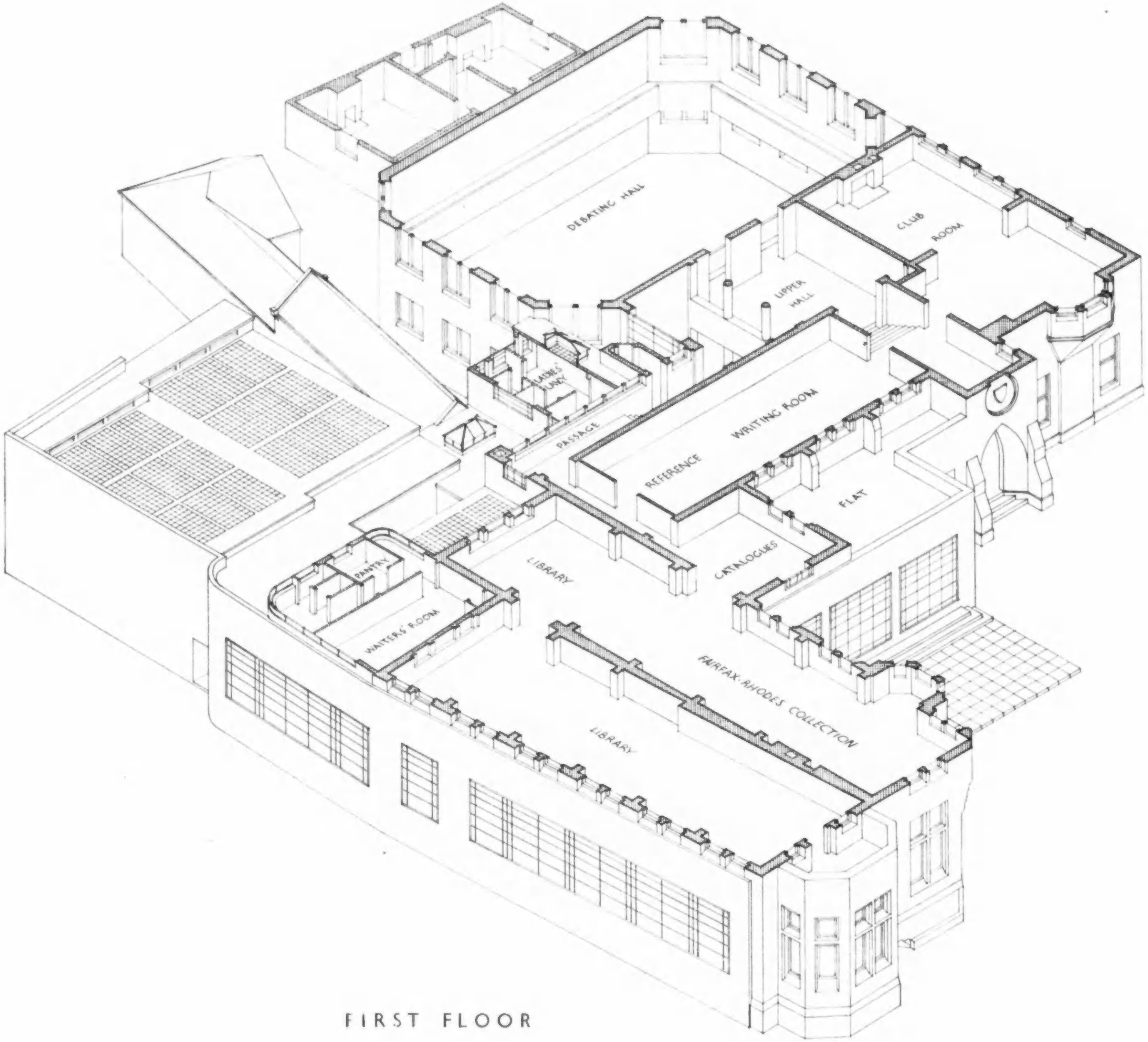


A PHOTOGRAPH of a model showing the alterations that are to be carried out by Mr. Harold Tomlinson to the old building of the Cambridge Union Society.

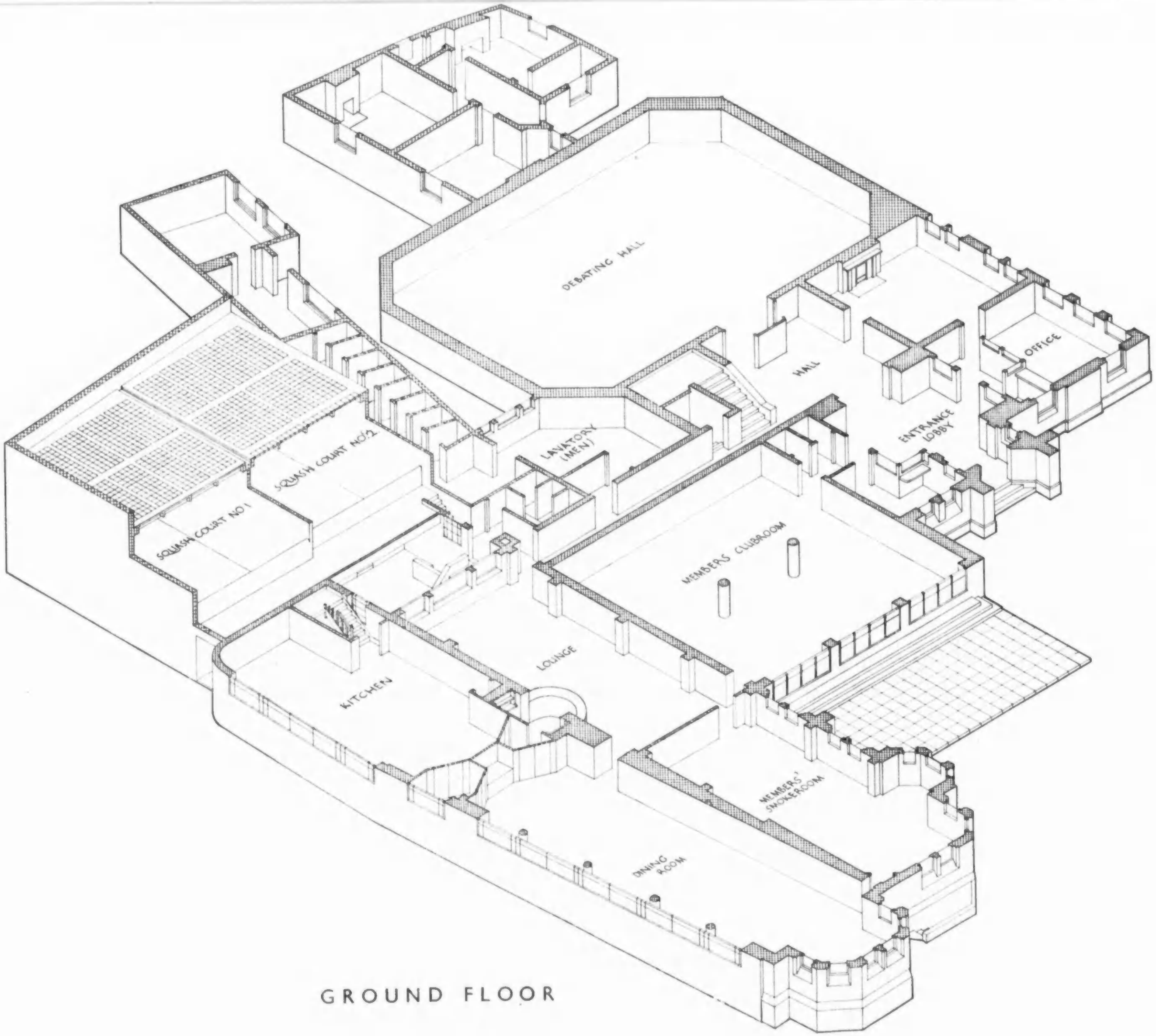
Isometric Plans of the altered building are given on the two following pages.

The alterations include: —

- Two new squash-courts with dressing-rooms, showers, etc.
- New Kitchens.
- New Dining Room, Lounge and Bar in part of the old Library.
- Moving the Library to the first floor in place of the old members' Smoking Room and Drawing Room.
- New Staff Quarters.
- New Smoking Room and Club Room in the old Reading Room and part of the Library.
- Enlarged entrance and new staircase.
- Accommodation of Fairfax Rhodes collection of books in the old Drawing Room, with furniture and book-cases by the architect.

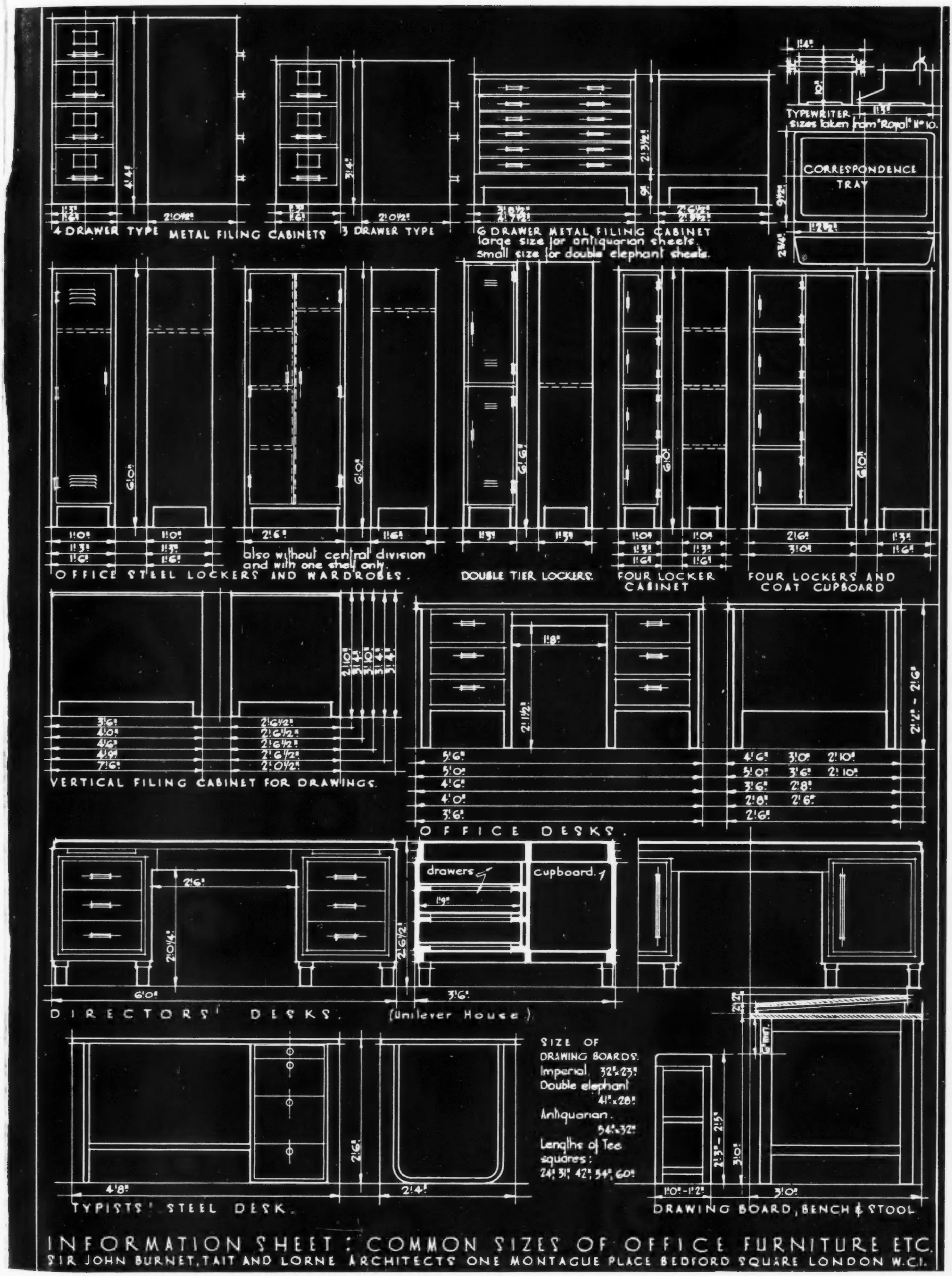

DEBATING HALL
CLUB ROOM
UPPER HALL
LADIES' LAVY
PASSAGE
WRITING ROOM
REFERENCE
FLAT
CATALOGUES
LIBRARY
PANTRY
WAITERS' ROOM
FAIRFAX-RHODES COLLECTION
LIBRARY

FIRST FLOOR


DEBATING HALL
HALL
OFFICE
ENTRANCE LOBBY
LAVATORY (MEN)
SQUASH COURT NO 2
SQUASH COURT NO 1
MEMBERS CLUBROOM
LOUNGE
KITCHEN
MEMBERS' SMOKEROOM
DINING ROOM

GROUND FLOOR

ISOMETRIC PLANS OF THE CAMBRIDGE UNION SOCIETY


4 DRAWER TYPE
METAL FILING CABINETS
3 DRAWER TYPE
4'4"
3'4"
2'0½"
2'0½"
1'3"
1'6"
6 DRAWER METAL FILING CABINET
large size for antiquarian sheets.
small size for double elephant sheets.
2'3½"
3'8½"
4'7½"
2'6½"
2'9½"
9"
1'4"
10"
TYPEWRITER
sizes taken from "Royal" No 10.
1'3"
CORRESPONDENCE
TRAY
9½"
1'2½"
2¾"
OFFICE STEEL LOCKERS AND WARDROBES.
also without central division
and with one shelf only.
6'0"
1'0"
1'3"
1'6"
2'6"
1'6"
DOUBLE TIER LOCKERS.
6'6"
1'3"
FOUR LOCKER
CABINET
1'0"
1'3"
1'6"
FOUR LOCKERS AND
COAT CUPBOARD
2'6"
3'0"
1'3"
1'6"
VERTICAL FILING CABINET FOR DRAWINGS.
3'6"
4'0"
4'6"
4'9"
7'6"
2'6½"
2'6½"
2'6½"
2'6½"
2'0½"
2'10"
3'4"
3'10"
4'4"
OFFICE DESKS.
1'8"
2'1½"
5'6"
5'0"
4'6"
4'0"
3'6"
4'6"
5'0"
3'6"
2'8"
2'6"
3'0"
3'6"
2'8"
2'6"
2'10"
2'10"
2'2" - 2'6"
DIRECTORS' DESKS. (Unilever House)
2'6"
2'0¼"
6'0"
drawers
cupboard.
1'9"
2'6½"
3'6"
TYPISTS' STEEL DESK.
4'8"
2'6"
2'4"
SIZE OF
DRAWING BOARDS.
Imperial, 32"x23"
Double elephant
41"x28"
Antiquarian.
54"x32"
Lengths of Tee
squares:
24", 31", 42", 54", 60"
DRAWING BOARD, BENCH & STOOL
2'3" - 2'5"
3'0"
1'0" - 1'2"
3'0"
2'2"
6" min.

INFORMATION SHEET: COMMON SIZES OF OFFICE FURNITURE ETC.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

• 27 •

OFFICE FURNITURE

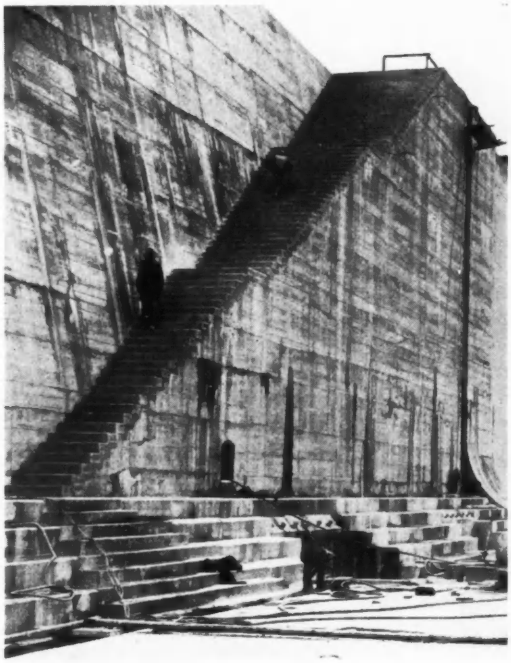
THIS week's Information Sheet shows common sizes of office furniture. It is the first of several devoted to furniture and fittings.

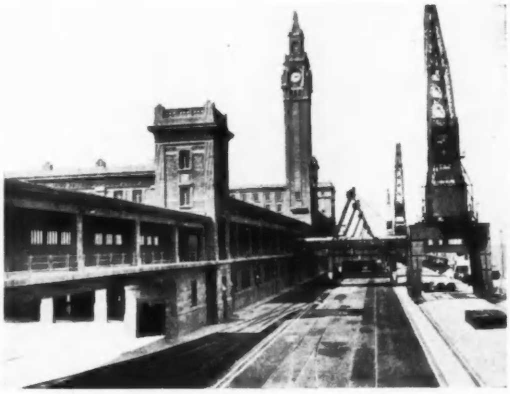
The following is a full list of the subjects previously issued:—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units.
13. Apr. 12—Lavatory Units.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes.
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs: 1.
23. June 29—Concrete Stairs: 2.
24. July 6—Pressed Steel Stairs: 1.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs: 2.

TWO NEW DOCKS

AT HOME AND ABROAD



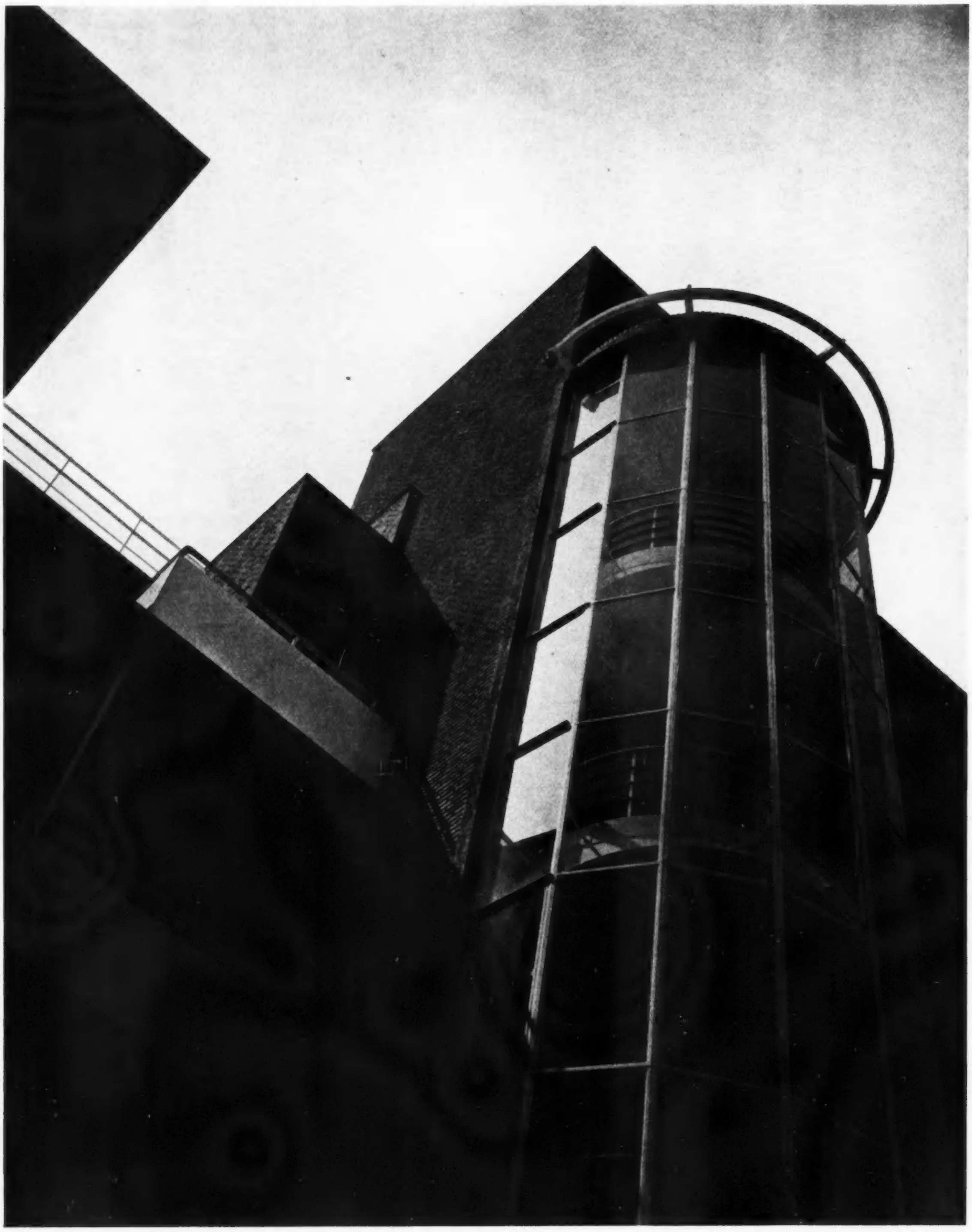


A COMPARISON of these two pictures should give some consolation to those who find themselves compelled to compare, say, Wembley Stadium with M. Garnier's Stadium at Lyons.

It is abroad, this time, instead of in England, that semi-official architecture appears inclined to perpetuate the attitude of twenty years ago, while the home product is the one whose straightforwardness we can all admire.

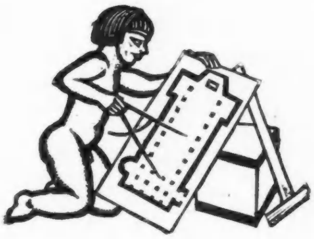
The upper photograph was taken in the new graving dock at Southampton, which was opened by the King and Queen on July 25. The Queen performed the naming ceremony with a silver bowl filled with Empire wine.

It is the largest dry dock in the world; it holds 260,000 tons of water, and yet can be pumped dry in about four hours, and cost £2,000,000. The lower photograph shows the new marine station and dock at Cherbourg, which was opened on July 30 by M. Lebrun, President of the French Republic.



THE ROYAL MASONIC HOSPITAL

A staircase window at the Royal Masonic Hospital, Ravenscourt Park, designed by Sir John Burnet, Tait and Lorne. The bay windows to the ward-block staircases, of which this is one, are hung from semi-circular concrete landings, which are cantilevered out from the reinforced concrete stairs. The hospital buildings, further illustrations and plans of which are reproduced elsewhere in this issue, were opened by H.M. the King on July 12.



M. INST. R. A.

THE INSTITUTE OF REGISTERED ARCHITECTS: LATEST DEVELOPMENTS

In our leading article last week we reported the arguments put forward by the promoters in creating the new Institute of Registered Architects. We further published a copy of the letter, circulated to the profession by Sir Edwin Lutyens, the president, inviting registered architects to become members of the Institute, and setting forth its primary aims. The Institute is intended to meet "the need for an organization complementary to the various architectural societies and focusing the aims of the Registered architect."

In that article we stated that we did not intend for the moment to support or condemn the new venture, since it involves questions of policy which must be thrashed out by practising architects themselves, and the societies implicated. This week we simply record the latest developments that have taken place as the result of our leading article and the letter circulated by Sir Edwin Lutyens. Up to the time of going to press the following three official communications have come to hand. That from Major Harry Barnes was issued to the Press and the other two are copies of circulars sent by the R.I.B.A. and the Essex, Cambridge and Hertfordshire Society of Architects, respectively, to their members.

Letter sent to the Press by Major Harry Barnes :

The Editor,
THE ARCHITECTS' JOURNAL July 28, 1933.

SIR,—A proposal to set up a new Professional Organization of those persons engaged in the practice of Architecture, under the title of an Institute of Registered Architects, has been brought to the notice of the Architects' Registration Council of the United Kingdom through a communication addressed to me, as Chairman of that body, by the promoters of the scheme. I understand that in communications to the press the proposal has been referred to as a "sequel" to the Architects' Registration Act. If the term "sequel" is to be understood as meaning that which necessarily follows, then I am of the opinion that it is misleading in this connection. I know of nothing in the situation which requires the setting up of a new body to protect the interests of Registered Architects. In so far as such persons are members of existing professional Architectural Organizations, and they form a vast majority of those on the Register, they are amply protected by the presence of direct representatives of those Associations on the Architects' Registration Council.

In so far as they are not members of existing professional organizations, and these form a relatively small minority of those on the Register, they are very ably represented at the present time and in the same proportion as those Registered Architects who are members of existing professional organizations by a gentleman appointed in the first place by the Secretary of State for Home Affairs as provided by the Act.

I do not know, and nothing in the communication which has been addressed to me enlightens me, as to what measures for the protection of Registered Architects are not either being or likely to be promoted by the Architects' Registration Council.

In the interests of the Council itself and of all the bodies represented upon it, I would ask any persons contemplating joining the proposed new Institute to suspend their decision until the views of the Council on the subject matter of the communication which has been addressed to them are known. This will follow immediately upon the next Meeting of the Council on September 25.—I am, Sir, your obedient Servant,

HARRY BARNES,
Chairman of the Architects' Registration
Council of the United Kingdom

Letter circulated by the R.I.B.A. to its members :

July 28, 1933.

DEAR SIR,—I understand that you have received a communication from a body calling itself the "Institute of Registered Architects."

This body has no connection whatever with the R.I.B.A., or with the Architects Registration Council, nor has it any functions of any sort in connection with the administration of the Registration Act.

Its creation is superfluous, and Members of the R.I.B.A. and the Allied Societies will be well advised to disregard it altogether.

To join such a body would, in fact, be a contravention of the Membership Declaration signed by every Member of our body.
—Yours truly, GILES GILBERT SCOTT, President.

Letter circulated by the Essex, Cambridge and Hertfordshire Society of Architects to its members :

July 29, 1933.

DEAR SIR,—You will have received a circular letter signed by Sir Edwin Lutyens, R.A., asking you to join "The Institute of Registered Architects."

We wish to remind you that The Royal Institute of British Architects, to which you are allied by reason of your membership of this Society, has been for the past hundred years the recognized body for controlling and governing the profession throughout the whole of the British Empire.

We are informed that a special meeting of the Executive of the R.I.B.A. was called immediately on hearing of this proposal, and we ask you *to abstain from replying in any way* to the Circular until we are able to give you more information, which we will do at the earliest possible moment.

Your interests are well guarded both by the R.I.B.A. and this Society, while cotraneous bodies can do no good and only tend to lower the prestige of the profession and confuse the public.

Please note that if you are already a Chartered Architect and have registered, you should sign all papers "*Chartered and Registered Architect.*"—We are, yours sincerely,

PERCIVAL C. BLOW, President
N. MARTIN-KAYE, Hon. Secretary

It is over a week since Registered Architects were invited by Sir Edwin Lutyens to join the new Institute, and now they are being asked by Major Barnes to suspend their decision until after September 25—a further period of about eight weeks. Surely if the Registration Council wishes to express itself on this question it should hold a council meeting at once.

The R.I.B.A. is the premier architectural society. Therefore it is to be hoped that the R.I.B.A. will issue, at the earliest possible moment, a detailed explanation of its circular and give cogent reasons as to why its members would "be well advised to disregard the new Institute altogether." This is an obligation the R.I.B.A. owes to every one of its own Registered members, to the profession at large, to the public, and, lastly, to the new Institute itself. The views of some of our readers are printed elsewhere in this issue.

The Architects' Journal
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NOTES & TOPICS

SOUTHAMPTON

WELL, the Southampton graving dock has been opened with great ceremony, and Southampton moves forward. But what about the plan? The great dock or harbour spans what used to be open water, so that the front of the town now lies behind a mass of dockland. Is this incorporated into the town plan? Has the town taken its new bearings? Has it asserted its right to collaborate in the control of the whole? No, no, no.

*

HAMPSTEAD'S ROADS

A storm has arisen because the Hampstead Borough Council last week decided to report to the London County Council that certain well-known roads may be considered for widening " as and when opportunity occurs."

*

Certain well-known Hampstead residents, including Lord Clarendon, Lord Moyne, Sir Gerald du Maurier, who lives at Cannon Hall close to the Heath; Lady Pentland, the sister of Lord Haddo, who is the Chairman of the Town Planning Committee of the L.C.C.; Mr. C. T. Le Quesne, K.C.; Mr. Maxwell Ayrton, Sir Reginald Blomfield and others, have rushed into print in defence of the amenities of old Hampstead.

*

Actually the London County Council are merely endeavouring to carry out the necessary procedure involved in preparing a plan of the built-up areas of London, acting on the powers given by Parliament under the Town and Country Planning Act. Information solely is required. I am told on good authority that there is no intention whatsoever at the present time of widening all or any of the roads mentioned in the list.

*

WESTMINSTER BUILDINGS: THE MUDDLE IN LONDON

Although all is so quiet officially on the Westminster front, behind the scenes there is a good deal going on. The plans for the new building to be erected in Parliament Square have been considered by the Royal Fine Art Commission which has, so it is believed, found much to criticize.

*

The promoters of this building complain that they have been allowed to proceed for many months with their plans in consultation with responsible officials, only at the eleventh hour, to be left in the lurch? This is one of the questions which is being discussed a good deal in local government quarters.

*

The fact, of course, is that we are in a state of hopeless muddle in London with regard to the control of new buildings. There is, in the first place, the Royal Fine Art Commission, with Lord Crawford as Chairman. This, at times, takes a rather pedantic view, and at other times, as in the case of Pinchin, Johnson's offices at Carlton House Terrace, takes no view at all. Accordingly, as readers of this JOURNAL are well aware, a second body was set up to advise on buildings to be erected on Crown Lands. This new body may well conflict in its functions with the Royal Fine Art Commission.

*

PLANNING

The Building Acts Committee of the London County Council have to consider plans for new buildings. The Town Planning Committee of the London County Council, with Lord Haddo as Chairman, is also inspecting plans, and even when it has no statutory power, is holding up a great deal of building by raising objections, sensible or otherwise. The District Surveyors are yet another body harassing the intending building owner. Finally, the Metropolitan Borough Councils, through their Borough Engineers and Medical Officers of Health, who are particularly interested in drains and similar questions, exercise still more control.

*

And does one committee know what the others are doing?

*

I was talking to the L.C.C. the other day. That is, to a small part of it, an uninfluential inconsequential morsel of it, a fragment of its Town Planning Department.

" This slum clearance scheme looks like business," said I. " Of course, you are having a hand in it."

" Hand in it. Good Lord, we don't know anything about it. That's another committee's job."

" But, surely," I gasped, " how can they hope to carry through a programme of that sort without the town planning section? Or is this vast programme a blind, or a pious hope, or something equally hopeless? "

Answer. There was no answer.

*

M.INST.R.A.

Now what am I to think about this new Institute of Registered Architects? Why should we need such an institute? What particular long felt want is it designed to fill?

I am a registered architect and a member of the Institute that made registration possible ; I wonder what my Institute particularly lacks that another new institute can supply.

*

There is today a body of people who can call themselves registered architects if they can prove that they practice and will pay a small fee ; and there is the R.I.B.A. ; and there are other small societies.

*

To the *uninitiated* it might appear that the body of registered architects were without any central association and leadership, and could not defend their rights, and that a society to help them would be a jolly good thing. In point of fact the greater proportion of them already belong to the R.I.B.A. which is working like a trojan to raise the standards of contemporary architecture, and so make the title " registered architect " something worth having.

*

So what is this new institute for ? I notice that my invitation to join came from the office of the I.I.A.S. and was signed by Sir Edwin Lutyens. I was also offered the value of an entrance fee if I would join before the registration lists close at the end of the year.

*

There seems to be considerable anxiety to do good, but, I ask myself, to whom ?

*

DEGREES OF DISGUISE

Letters after one's name are impressive, even when they only stand for the punctual annual payment of certain guineas. To the laymen they represent *authority*, but occasionally they spell mystery.

*

A charming lady once confessed to me that she had always thought F.R.I.B.A. was a euphemism for some vital but indelicate part of one's internal workings.

*

There is a great deal of ignorance about architects and their ways, which might perhaps be cleared up if responsible bodies like the R.I.B.A. emulated the British Medical Association, which adopted, by a large majority at the Dublin Conference last week, a motion to advertise the " service " of the Medical Profession.

*

PROFESSIONAL ADVERTISING

The B.M.A. scheme is to advertise public medical service in definite areas, never advertising any individual medical practitioner, but allowing any registered medical practitioner in the area to become a member of the " service."

*

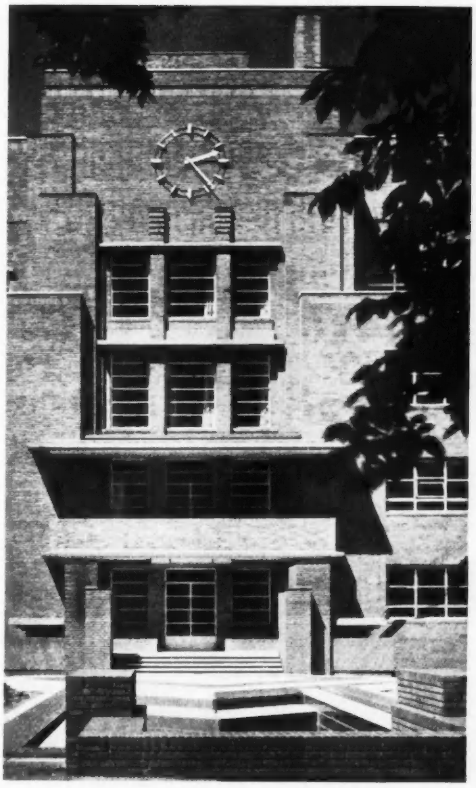
The importance of medical advice has far less need of advertisement than the importance of architectural advice and guidance. Most people have the sense to employ a doctor at an appropriate time. But about architects most people nourish the most libellous misconceptions.

*

I was introduced to a large and painfully costly Victorian house the other day by an extremely intelligent man who was also very wealthy. I asked him why he had bought such a house.

*

" I could see what I was buying," he answered, " and it gave me just the accommodation I wanted. Also I knew what I was spending. If I'd gone to an architect——" I interrupted him and suggested that if he'd gone to an architect he'd have got a good looking, commodious house belonging to his own century.



The Royal Masonic Hospital. The central feature of the Ward Block with the lily-pond in the foreground. The building is illustrated in this issue.

*

" Perhaps," he agreed. " But I don't trust architects. I've been to many. I say, ' I have £5,000 to spend, no more. I want so-and-so. Can it be done ? ' And invariably they go away and produce designs for a house than can't possibly be built under £8,000. Then I pay them the scale fees for work abandoned and get something ready-made. When I refer to this playful little habit, I notice that architects always laugh and seem to be quite pleased."

*

I suppose, by the way, that that *is* a libellous misconception ? It's a very common complaint. But isn't it worth organizing some propaganda to explain what a safeguard for comfort and convenience an architect really is ?

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, August 3

COTTAGES IN THE STRAND. Exhibition, until the end of the month, of the Building Centre prize-winning cottages on the Aldwych site, Strand, W.C.

ROYAL ACADEMY, Burlington House, Piccadilly, W.1. Summer Exhibition. Until August 7. 9 a.m. to 7 p.m. 9 *a.m*

Saturday, August 5

Sunrise 5.29 a.m. Sunset 8.43 p.m.

Monday, August 7

Bank Holiday.

NEWS

●

POINTS FROM THIS ISSUE

It is hoped that the R.I.B.A. will issue, at the earliest possible moment, a detailed explanation of its circular and give cogent reasons as to why its members would "be well advised to disregard the new Institute altogether" *131*

Architects must not forget the perambulator *135*

Most people who talk about "modern decoration" and "modern architecture" usually mean a lot of applied jazz *152*

The architect, by training and tradition, is of all men the least able to appreciate the wants and aspirations of the lower middle class *153*

●

EDUCATION IN TOWN PLANNING

Under the leadership of the Town Planning Institute, and with the aid of other professional institutes and the universities, much progress has been made in recent years in connection with the education of the town planner (writes Mr. Thomas Adams in a letter to *The Times* for August 1). On the other hand, observation of the injurious effects of failure to plan, public discussion of remedial legislation, and the influence of examples and experience in making planning schemes have greatly increased public understanding on the subject. Notwithstanding, however, that education has advanced along with legislation, the greatest need of the moment is for more education. Town planning as related to modern problems of urban and rural life is new. Much more time must elapse before those who adopt town planning as a profession can have the benefit of the knowledge which accumulates from a long succession of experiences. Moreover, town planning deals with such a variety of matters that no one man can completely master the subject in all its phases—architectural, engineering, legal, and administrative. Hence in a special degree its effectiveness in promoting human and civic welfare depends on collaboration of specialists in different fields.

A number of those who are interested in this question (he continues) have decided that it is desirable to organize a meeting, in the form of a summer school, for the purpose of discussion and exchange of views regarding practical problems in town planning. The purpose of the school, which will be held at Digswell House, near Welwyn Garden City, from September 11 to 17, is entirely educational. Sir Raymond Unwin, Sir Theodore Chambers, Sir Ernest Simon, Dr. I. G. Gibbons, and Mr. G. L. Pepler are among the experts who will preside at or lead in the discussions. No fees are being paid for personal services, and the expenses of organization are being met by a few interested subscribers. Further particulars are obtainable from the Honorary Secretary, Town and Country Planning School, Parkway Chambers, Welwyn Garden City.

DECLINING TRADE

Employment in the Building and Public Works Industry has fallen during the past month. This means that the winter decline in trade has set in much earlier than usual this year. It may well mean that the loss of trade to the Industry during the coming winter will be the greatest yet experienced. We now know from the Ministry of Health Report, that the loans sanctioned were reduced from £47 millions in 1931 to £20 millions in 1932. This means that no fewer than 180,000 workmen will be permanently unemployed until that £27 millions is put back into circulation. The Special Committee for Public Relations of the Building Industries National Council is now having brought to its notice instances where the effect of the present artificial restriction of building works is being felt to an increasing extent by individual firms of materials suppliers.

The Industry must organize itself to spread the knowledge of the national economic ills that always arise from a sparsely and casually employed Building Industry.

Subscriptions to the fund of the Special Relations Committee of the B.I.N.C. should be addressed to Mr. Oswald Healing, F.S.I., at 5 Duke Street, Adelphi, W.C.2.

ARMSTRONG COLLEGE, NEWCASTLE-UPON-TYNE

At a recent meeting of the Armstrong College Council, the Council appointed Mr. Robert Neville Brown, A.R.I.B.A., A.M.T.P.I., to the lectureship in Architecture (Town Planning). Mr. Brown was educated at South Shields High School, Rossall, and the School of Architecture, Armstrong College. He has held appointments as an architect to the Education Architect of the County Council of Durham, H.M. Office of Works, London, and the Education Office, Newcastle. With this addition to the School of Art the school can provide not only qualifications in architecture, but the new degree of B.Arch. of the University of Durham, the College Diploma in Architecture, and the Certificate of Associate of the R.I.B.A., and also the newly instituted College Diploma and Certificate in Town Planning, of which the former carries exemption from the examination for membership of the Town Planning Institute.

THE CALTON SITE

The Royal Fine Art Commission for Scotland have now approved of the selection of the Calton site for the proposed Government buildings in Edinburgh.

BIRMINGHAM ARCHITECT'S APPOINTMENT

A step further in connection with the scheme for the transfer of King Edward's High School from the historic position in New Street, Birmingham, to a new site in Bristol Road, Edgbaston, was taken last week when the Governors selected Mr. Holland W. Hobbiss, F.R.I.B.A., to design the new buildings. Mr. Hobbiss is an old Edwardian.

£5,000,000 TUBE EXTENSION OPENED

The final section of the extension of the Piccadilly Line, from Enfield West to Cockfosters, was opened on Monday last. Begun in the autumn of 1930, the extension has cost approximately £5,000,000. Several of the new stations have been illustrated in this JOURNAL during the past eighteen months.

THE MINISTER OF HEALTH

At the end of September and the beginning of October the Minister of Health proposes to visit the areas of certain local authorities in order to make closer contact with the personnel and work of the authorities. Amongst the conditions to which he will devote particular attention will be the practical and local aspects of slum clearance and reconditioning. His visit will coincide with the period during which housing authorities in general have been requested by the Minister to submit schemes for dealing with slums within a period of five years.

In the autumn of last year the Minister of Health paid similar visits to Tyneside and the Counties of Lancashire, Glamorgan, Monmouth and Brecon. This autumn the authorities to be visited will be for the most part County boroughs.

NORWICH MUNICIPAL OFFICES

At a recent meeting of the Norwich City Council it was announced that there was a possibility of the Ministry of Health holding an inquiry into the Municipal offices scheme at an early date.

A statement by the City Accountant showed in effect that the cost of the scheme as now revised (£192,047) would approximate to a 2½d. rate.

THE EUROPEAN MEDITERRANEAN ACADEMY

Mr. and Mrs. Robert Solomon gave a reception at 14 Holland Park Road, London, on July 19, on behalf of the Patrons of the European Mediterranean Academy.

Among those present were :—Sir Raymond

Unwin (representing the Patrons), Mr. H. Th. Wijdeveld, Dr. Erich Mendelsohn (Directors of the Academy), Mr. Eric Gill, Mr. Serge Chermayeff (English representative of the Academy), Lady Unwin, Mrs. Erich Mendelsohn, Mrs. Serge Chermayeff, Mr. and Mrs. Anning Bell, Mr. and Mrs. D'Arcy Braddell, Mr. Donald Attwater (Secretary for the Academy), Mr. and Mrs. Bridgwater, Mrs. Bussé, Mr. T. F. Burns, Mr. D. Cooper, Mr. and Mrs. Victor Gollancz, Mr. René Hague, Sir Ambrose Heal, Mr. H. de C. Hastings, Mr. Knapp-Fisher, Professor John McMurray, Mr. Charles Marriott, Mr. and Mrs. Maufe, Mr. Herbert Minshall, Mr. F. H. Mayor, Mr. and Mrs. Lucien Pissarro, Miss Orovida Pissarro, Mr. and Mrs. Poliakoff, Mr. Herbert Read, Mr. Gilbert Solomon, Dowager Lady Swaythling, Mr. and Mrs. Tollanaer, Mr. and Mrs. Philip Trotter, and Lord Waring.

GREATER LONDON REGIONAL PLANNING COMMITTEE

The Greater London Regional Planning Committee, recently constituted as a Statutory Advisory Committee under the Town and Country Planning Act, 1932, have appointed Mr. R. Hardy Syms, F.S.I., M.T.P.I., as Technical Adviser to the Committee.

THE SLUMP FINISHED

While people on all sides are asking each other whether they see any signs of improvement in business, and many are replying that there is a better "feeling in the air," few have so far given facts to support their statements.

The Research Department of the Advertising Association, however, has just issued some remarkable figures which tend to show conclusively that the slump is at an end.

It has always been agreed that the first true sign of improvement would be an increase in the prices of raw materials. Here are a few which have shown a steady rise during the first half of 1933 :—

(London gold prices per unit.)

	Dec., 1932		June, 1933
Cotton	7	to	8½
Wool	23	to	27
Sugar	5¼	to	6
Tea	9½	to	11
Rubber	2½	to	3¼
Spelter	15½	to	17
Copper	30	to over	38
Lead	11	to	13½
Tin	155	to	220

The Department has also examined the balance sheets of some twelve hundred public companies issued during the period January to June. It is found that, while during the first half of 1932 only 377 companies showed increased profits, during the first half of 1933 no fewer than 539 companies —over 40 per cent. more—showed increased profits.

Among these companies of those which can appropriately do so the great majority consistently and persistently advertise their products.

HOUSING THE PERAMBULATOR

Dr. E. H. T. Nash, speaking at the first annual meeting of the British Medical Association, held in Dublin last week, said no architect had solved the problem of the damage done to houses by the old-fashioned type of perambulator, which in many cases was still being used by the poorest people second hand, third hand, and fourth hand. The handles left their imprints all round the room, because the pram was used as a cot, and there was a dado of marks all round the room. "It is surely not beyond the capacity of the architect to devise some means whereby the perambulator does not get into the house."

R. I. B. A.

MAINTENANCE SCHOLARSHIPS IN ARCHITECTURE

The R.I.B.A. announce that the following Scholarships, each of £100 a year, have been renewed for a further period of one year :—

Mr. E. F. Ward (Architectural Association School of Architecture, London).

Mr. A. M. Irvine (School of Architecture, Robert Gordon's Colleges, Aberdeen) (4th and 5th Year Maintenance Scholarship).

Mr. M. G. Gilling (Liverpool School of Architecture, University of Liverpool) has been recommended to the Artists' General Benevolent Institution for the renewal of his Scholarship of £100 for another year.

A special extension for one year of the Scholarship of £100 awarded in 1930 has been granted to Mr. Ralph Dickinson (Birmingham School of Architecture).

The Ralph Knott Memorial Maintenance Scholarship of £45, tenable at the Architectural Association School of Architecture, has been awarded to Mr. C. O. Tremeer.

THE EXAMINATIONS

THE FINAL EXAMINATION : The Final Examination qualifying for candidature as Associate R.I.B.A., was held in London and Edinburgh from July 5 to 13. Of the 173 candidates examined 65 passed (18 in Part 1 only) and 108 were relegated. The successful candidates are as follows : Messrs. E. de la T. Abrams ; J. S. Adams ; A. J. Baxter ; W. H. Beattie ; E. E. Bedingfield ; J. A. Bent (Part 1 only) ; S. Bentley ; H. C. Boardman ; H. J. Brewster (Part 1 only) ; A. G. Church ; W. E. G. Coker ; F. R. D. Coleman ; R. E. Cookson ; E. A. Day ; P. A. d'Avoine ; L. S. Dyer (Part 1 only) ; G. C. Fardell (Part 1 only) ; L. H. A. Fermaud (Part 1 only) ; A. F. Fry (Part 1 only) ; (Miss) A. R. Gascoigne ; J. Gedge ; H. V. Godsall ; L. J. Grigg (Part 1 only) ; E. A. Grove ; R. R. C. Halahan ; V. Hamnett ; R. Harley-Smith (Part 1 only) ; J. E. K. Harrison ; W. N. Hawkes ; P. B. Herbert ; F. O. E. Hill ; F. A. Howard (Part 1 only) ; W. Ingham (Part 1 only) ; F. Johnson : J. E. R. G. Kean C. M. G. Keeping (Part 1 only) ; J. W. Laing ; A. C. Layfield ; B. Locke ; J. D. T. Marsh ; S. Maskell ; C. O Middlemiss : L. W. Millard; S. W. Minson ; J. R. Moore ; C. J. Morreau ; J. S. Mould; W. L. Nicholson ; R. J. Potter ; J. F. Prior (Part 1 only) ; J. E. Reid ; F. B. Reyner (Part 1 only) ; W. C. Robson (Part 1 only) ; C. G. Runnicles (Part 1 only) ; W. J. Scott (Part 1 only) ; A. L. Sharpe ; C. H. Simmons ; H. A. Snow ; G. H. L. Stubbs (Part 1 only) ; W. H. Timmons ; C. M. Townend ; M. G. Wardley ; A. Wilkinson (Part 1 only) ; G. R. H. Wright and H. M. Wright.

THE SPECIAL EXAMINATION.—The Special Examination qualifying for candidature as Associate R.I.B.A., was held in London from July 5 to 11, and in Edinburgh from July 5 to 13. Of the 18 candidates examined, 9 passed (1 in Part 1 only, and 2 in Part 2 only) and 9 were relegated. The successful candidates are as follows : Messrs. A. R. Borrett ; F. P. Chambers (Part 2 only) ; R. Dilworth ; R. Dron (Part 1 only) ; A. Gill ; S. G. Goligher (Part 2 only) ; L. Pearce ; R. B. Pearce and B. S. Roberts.

THE EXAMINATION IN PROFESSIONAL PRACTICE FOR STUDENTS OF SCHOOLS OF ARCHITECTURE RECOGNISED FOR EXEMPTION FROM THE R.I.B.A. FINAL EXAMINATION.—The Examination was held in London and Edinburgh on July 11 and 13. Of the 26 candidates examined, 20 passed and 6 were relegated. The successful candidates are as follows : Messrs. H. G. Baker ; J. C. Ballinger ; (Miss) R. H. Brooks ; (Miss) H. M. Bryce ; G. L. Cadell ; J. A. Carrick ; (Miss) C. Dickinson ; K. J. Grice ; E. H. Hickton ; (Miss) P. D. Jackson ; H. Lind ; D. Livingstone, F. W. Mudd ; (Miss) E. C. C. Philip ; C. F. Redgrave ; A. A. Robin ; D. H. Rowledge ; A. W. Thornton ; (Miss) E. M. Wilmot and A. R. Young.

COMPETITION

NEWS

COMPETITION BARRED

The following notice has been issued by the R.I.B.A. regarding the limited competition for a new public elementary school to be erected at Hen Lane, Coventry.

"The Competitions Committee desire to call the attention of Members to the fact that the Conditions of the above competition are not in accordance with the Regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime Members should not take part in the competition."

Competitions Open

September 1.—Sending-in Day. Proposed Hospital at Surbiton. Assessor : C. E. Elcock, F.R.I.B.A. Premiums: £120, £75, £50 and £25. The conditions, obtainable from A. C. C. Dunn, Hon. Secretary, Surbiton Hospital, St. James's Road, Surbiton, were reviewed in *A.J.* for May 24.

September 11.—Sending-in Day. The Directors of Gidea Park, Ltd., invite designs for five different types of house (ranging from £400 to £900). Assessors: Prof. S. D. Adshead, F.R.I.B.A., A. E. Beresford, F.R.I.B.A., Ald. Ewart G. Culpin, F.R.I.B.A., E. Maxwell Fry, A.R.I.B.A., Howard Robertson, F.R.I.B.A., and W. Harding Thompson, F.R.I.B.A. In addition to being paid a fee according to the scale of charges of the R.I.B.A., the authors of the first five selected designs in each class will be paid a premium of £10. Particulars obtainable from Gidea Park, Ltd., The Estate Office, Hare Street, Gidea Park, Romford, Essex. Deposit 5s.

September 21.—Sending-in Day. Proposed Town Hall for the Borough of Hornsey. Assessor: C. Cowles-Voysey, F.R.I.B.A. Premiums: £350, £250 and £150. Full conditions, etc., were published in our issue for May 17.

No Date.—Competition for speculative house designs, organized by the Architectural Association with the co-operation of Messrs. John Laing and Sons, Ltd. Three types of house are required. Assessors: C. Lovett Gill, F.R.I.B.A.; L. H. Bucknell, F.R.I.B.A.; J. R. Leathart, F.R.I.B.A.; Arthur W. Kenyon, F.R.I.B.A.; T. Alwyn Lloyd, F.R.I.B.A.; and J. W. Laing. Premiums: £25 for the design placed first in each group. Copies of the conditions are being issued free, on application, to all members of the Architectural Association, and members of the R.I.B.A. can obtain copies (price 2s. 6d.) from Mr. F. R. Yerbury, General Secretary, The Architectural Association, 34-36, Bedford Square, W.C.1. Full particulars of the competition were published in our last issue.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Development of the coastguard site, Bexhill. Assessor: T. S. Tait, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere A.R.I.B.A. Conditions are now being drawn up by the assessor.

Decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas. Conditions governing the competition, which closes on December 15, 1933, will be issued on September 30 next.

OBITUARY

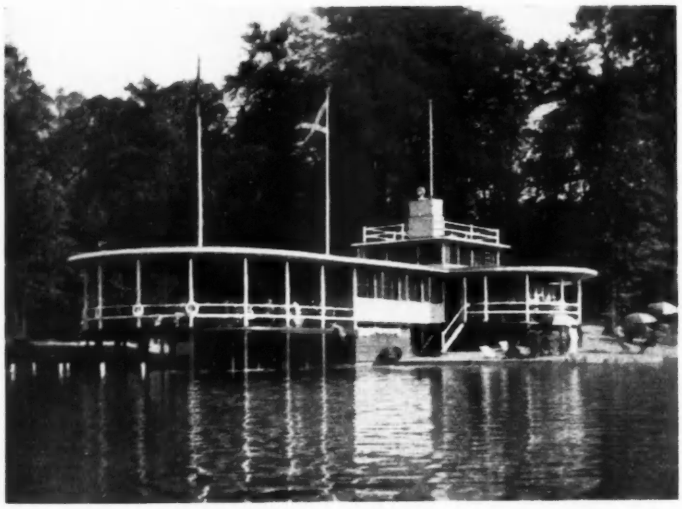
We regret to record the death of Mr. Charles James Dawson, F.R.I.B.A., architect to the Barking Borough Council.

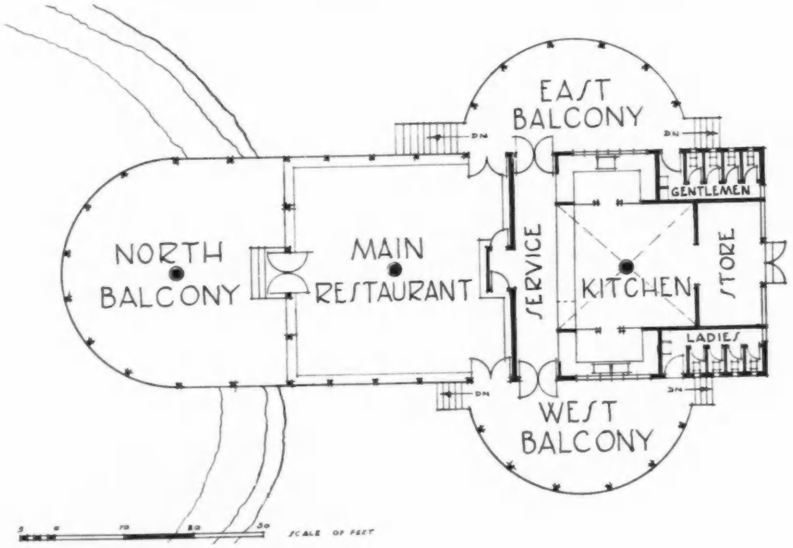
Mr. Dawson had been associated with the official life of Barking practically throughout his career, and was recently congratulated by the Borough Council on having completed fifty years' service.

Change of Address

Mr. Trevor J. S. Blake, architect and surveyor, has changed his address from 15, Old Church Road, to 12, Hall Lane, Chingford. His telephone numbers are still Silverthorn 1624 and 1947.

ROAD HOUSE AT COBHAM





This road house, known as "Laughing Water," has been built in the grounds of Cobham Hall, Kent, for the Earl of Darnley. It lies on the edge of a lake, just off the main road to the south coast, between Gravesend and Rochester.

The building is constructed entirely in English or Empire timber. The piles are of oak, creosoted, the under framing is of Western Hemlock, and the superstructure is of 6 ins. by 1 in. Douglas Fir clap boarding, painted in a broken white. The interior is lined with plywood.

The two photographs show the building from the lake, and the interior of one of the open bays. The roofs of these bays, which have been left unlined, are of 7 ins. by 2 ins. Douglas Fir rafters arranged fan-wise.

BY CLOUGH WILLIAMS-ELLIS

LETTERS *FROM* READERS

N. MARTIN-KAYE, F.R.I.B.A.
Secretary, Essex, Cambs. and Herts. Society of Architects
CECIL SHARP, F.R.I.B.A.
A.R.I.B.A.
WORRIED
T. LAWRENCE DALE, F.R.I.B.A.
A. EDWARD HAMMOND
PATERFAMILIAS

The Institute of Registered Architects

SIR,—With reference to the letter published in your last issue concerning the Institute of Registered Architects, it might be of interest to your readers to be acquainted with the action this Society has taken in the matter, and I append a copy of a letter which has been dispatched to every member of this Society, numbering about 400.

N. MARTIN-KAYE
Hon. Secretary,
Essex, Cambridge and Hertfordshire Society of Architects.

[*The letter mentioned by our correspondent will be found in the leading article in this issue which deals with the above subject.*—ED. *A.J.*]

SIR,—One must be interested and perplexed, as well as curious. We architects (I presume members of the R.I.B.A.) have received a printed invitation to become members of another architectural institute, and in your last issue you published a letter from the President of this Institute. Why another institute? The layman and I are both perplexed, and I wish to present my incompetent but candid opinions, however in error they may be:

I am, jointly with some thousands of others, a member of the R.I.B.A. Is not this premier body of Chartered Architects the one and only recognized Institute in Architecture, and does not and should not this Institute embody the 1 to 6 inclusive points enumerated in the letter published under the heading, "Institute of Registered Architects"?

Are not members of the R.I.B.A. recognized as "The hall mark of competence and trustworthiness," and accepted as such in a Court of Law?

Do not such members "practise and possess through their membership a code of professional ethics" and conform to a code of professional practice and the observance of rules for the general good of the profession?

Is there any additional competence implied by adding the designatory letters, M.Inst.R.A.? especially as inducements are held out for the purchase of such designatory letters, namely:—

No entrance fees before a certain date. . . .

Two guineas per annum, reduced to one guinea per annum, under certain conditions.

The Royal Institute of British Architects should make it quite clear and evident without a shadow of doubt why it is the premier one, and the only recognized body. Why have another institute? The R.I.B.A. is the R.I.B.A., the one and only recognized authority upon all matters of or connected with architecture.

We live in flamboyant and perhaps infectious and vicious times. Do let us, one and all, professional and lay, have one and only one authority we can turn to for good advice, reliance and "trustworthiness."

CECIL A. SHARP

SIR,—The establishment of the Institute of Registered Architects is no more than might have been expected after the Registration Act came into operation.

The verbiage of the penultimate paragraph of Sir Edwin Lutyens's letter in your issue for July 27 imperfectly conceals the fact that membership of the new society will be open to anyone who has succeeded in putting his name on the Register. It will, therefore, provide a convenient means of strengthening, in the unseeing eyes of the public, the position of those registered architects who are unable or unwilling to qualify for membership of a society with more stringent requirements.

It would be interesting to know in what way the Institute of Registered Architects proposes to remove the dangers to the profession which you mentioned in your leading article. The probability of amendment of the Registration Act is remote, but I am afraid, from Sir Edwin Lutyens's letter, that his society will only lead the way into entanglements of professional ethics similar to the idiocies of the medical and other "closed" professions.

For myself, I am still content with the time-worn initials,

A.R.I.B.A.

SIR,—I noted with interest in your leading article last week, on the subject of the new Institute of Registered Architects, a statement by the promoters that their venture has no connection whatever with the Incorporated Institute of Architects and Surveyors.

That being the case, I wonder whether they are aware that, by a curious coincidence, the I.I.A.S. also have their headquarters at the very same address, 1, Wilbraham Place; whether their secretary, Major Athoe is aware that the secretary of the I.I.A.S. is also called Major Athoe; and whether the president of the new organization, Sir Edwin Lutyens, is aware that the rival organization is presided over by another gentleman also called Sir Edwin Lutyens.

It seems only fair to warn the promoters of the new Institute that they have, presumably in all innocence, lodged themselves in the very heart of an alien camp.

WORRIED

Where the Trouble Starts

SIR,—The following may be of interest:—

Extract from a Public School Syllabus:

Extras

Art	5s.
Bookkeeping ..	£2 2s.

T. LAWRENCE DALE

The Shop Window

SIR,—Three years ago Professor A. E. Richardson said: "To judge from the average English shop, our shopkeepers have learnt nothing of showmanship, reticence, or human psychology." Today Astragal says: "Like the ignorant savage farmers of the Middle West who act as a brake upon all that is enlightened and progressive in American policy, the little narrow shopkeepers of England slow up every moment to improve the design not only of the things they sell, but of everything else. Their little shops are often rubbish heaps. But they are proud of their stupidity." So much for three years' progress.

However, let us be patient. Within

that interval a Board of Trade Committee on Salesmanship has sat and reported. Shop assistants, metamorphosed into salesmen and saleswomen, have been encouraged to concentrate upon verbal salesmanship with inevitable diversion of their interests in visible showmanship. Having acquired proficiency in the airy art, perhaps they may now be allowed to look to their windows.

Let us also be comforted a little with the knowledge : first, that more architects are designing shops with windows that are a direct encouragement to *designed* displays ; and, secondly, that sham Tudor (at least as far as shops are concerned) seems to be on the decline.

Is it significant, or only an encouraging coincidence, that your contemporary, *The Listener*, has a leading article, entitled " Shop-window," in its current issue ? The following extract comes as a cheering antidote to Astragal's depressing draught.

" There are fewer shops each year that think the first duty of showmanship is to cram as much of their stuff as possible into the window ; there are more where half a dozen objects arranged by someone with a sense of design immediately flash a message of information to the potential buyer."

That is perfectly true. But so, unfortunately, is what Astragal says.

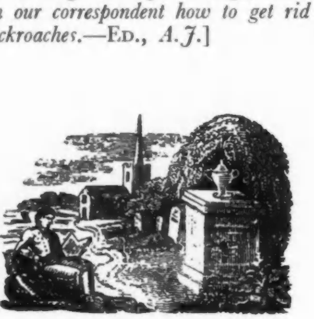
A. EDWARD HAMMOND

Slum

SIR,—Since receiving the Slum Number of THE ARCHITECTS' JOURNAL bugs have appeared in my house. As it is more than likely that they arrived either *in* THE ARCHITECTS' JOURNAL or in protest *against* THE ARCHITECTS' JOURNAL, I should be glad to know what you intend to do about it.

PATERFAMILIAS

[*There are several ways of getting rid of bugs. We favour the introduction of cockroaches into the house. When the cockroaches have got rid of the bugs, we will inform our correspondent how to get rid of the cockroaches.*—ED., *A.J.*]



SOCIETIES AND INSTITUTIONS

THE ARCHITECTURAL ASSOCIATION

A party of members of the Architectural Association under the leadership of its President, Mr. C. Lovett Gill, is at present inspecting examples of modern Italian architecture, including workmen's dwellings.

Their itinerary includes Florence, Rome, where they are staying for one week, and Milan, where the party have made an extensive tour of the Triennial Exhibition of Decorative Arts and Modern Architecture.

R.W.A. SCHOOL OF ARCHITECTURE

The annual exhibition and distribution of prizes of the Royal West of England Academy School of Architecture were held in the galleries of the R.W.A. on July 21 . The chair was taken by Sir Harold Brakspear, K.C.V.O., the President of the Wessex Society of Architects. Mr. G. D. Gordon Hake, the principal, gave a report of the year's work of the school, and the prizes were presented by Mr. W. H. Ansell, M.C., F.R.I.B.A.

Following is a list of the awards :—

First Year : R.W.A. Bronze Medal and B.S.A. Prize of £2 2s.—W. J. Sheppard. *Proxime accessit*—J. C. de C. Henderson.

Second Year : R.W.A. Silver Medal and B.S.A. Prize of £3 3s.—F. W. Smith. Bertram Wills Prize of £2 2s.—O. S. Brakspear. Ralph Edwards Construction Prize —T. L. Viney.

Third Year : A.A. Design Prize—R. H. Sheppard. Bertram Wills Prize of £2 2s.— A. E. Carter.

Fourth Year : Dame Janet Stancomb-Wills. Travelling Studentship (£25)—W. R. Stenner. Mrs. Richardson's 5th year Bursary (£18 18s.)—Miss K. Gibbons. The Savory Design Medal—C. Hayes. Harold Todd Construction Prize—C. Hayes.

Headmaster's Prize of £2 2s. for most marked progress—D. J. Clark.

Eustace Button Measured Drawing Prize to the value of £2 2s.—W. R. Stenner and C. Hayes.

Certificates.—J. M. Denney, R. H. Sheppard, E. Sutherland, E. W. Donati, K. Gibbons, W. R. Stenner, C. Hayes and L. H. Wakefield.

MANCHESTER SOCIETY OF ARCHITECTS

On Thursday evening, July 13, a summer visit by the Manchester Society of Architects was paid to buildings designed by Mr. W. A. Johnson, F.R.I.B.A., architect to the Manchester Co-operative Wholesale Society. The buildings visited included a large warehouse attached to a tobacco factory ; and the extension to the Cooperative Union Building.

Another visit was paid on Wednesday evening, July 26, to the Mines Rescue Station at Boothstown, designed by Messrs. Bradshaw Gass and Hope. This building has been constructed as a consequence of recent legislation to provide accommodation and apparatus for trained men to carry out rescue work at mines in the Lancashire and Cheshire district. Accommodation is also provided for the training of other men and includes galleries in which will be reproduced conditions which may be present in a mine when a serious accident has occurred.

IN PARLIAMENT

Adelphi Estates Bill

The Adelphi Estates Bill, writes our Parliamentary Correspondent, has received the Royal Assent.

Slum

Mr. Maxton asked the Minister of Health if he could give figures, to the latest date, showing what progress had been made with his campaign against slums in the last 12 months.

Sir Hilton Young said that during the twelve months ended June 30 last local authorities in England and Wales submitted to the Minister resolutions declaring 406 areas, comprising 7,443 houses, to be clearance areas ; 293 Clearance and Compulsory Purchase Orders affecting 6,910 houses were submitted for confirmation during this period, and 241 Orders, affecting 5,582 houses, were confirmed ; in addition 362 houses were purchased by agreement.

Mr. Hicks asked the Minister of Health if he would state what was the total number of houses contained in proposals submitted by local authorities in England and Wales for approval under the proviso to Section 1 of the Housing (Financial Provisions) Act, 1933 ; and whether he could state how many of these houses would be approved for Exchequer assistance under the Housing (Financial Provisions) Act, 1924.

Sir Hilton Young said he regretted that these figures were not available. Applications submitted by local authorities were often indefinite on the point of the number of houses to be provided, and as regarded the second part of the question, a number of applications were still under consideration. The number of houses so far approved under the proviso was approximately 6,000.

Slum Clearance in Potteries

A Ministry of Health inquiry is to be held into a protest by owner-tenants of houses in Penkhull, Stoke-on-Trent, against the City Council's proposal to build 72 working-class houses in the neighbourhood under a slum clearance scheme (states *The Manchester Guardian*). The protesters complain that the proposal can only result in the wholesale depreciation of their property. They state that the area had been scheduled by the Town Planning Committee as a " residential " district.

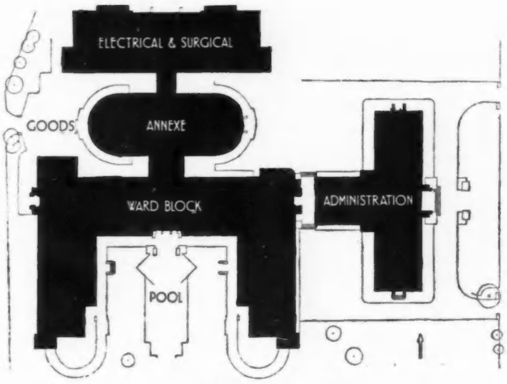
The case of the Housing Committee of the Council is that the rehousing of displaced tenants from slum areas is urgent and that there is a lack of more suitable sites in the city.

Leeds Civic Building

H.M. the King is officially to open the new Civic Hall, Leeds, designed by Mr. E. Berry Webber, F.R.I.B.A., on August 23. In connection with the ceremony, a grandstand is now being erected in the Headrow to accommodate 3,000 people.

THE ROYAL MASONIC HOSPITAL

DESIGNED BY SIR JOHN BURNET, TAIT AND LORNE

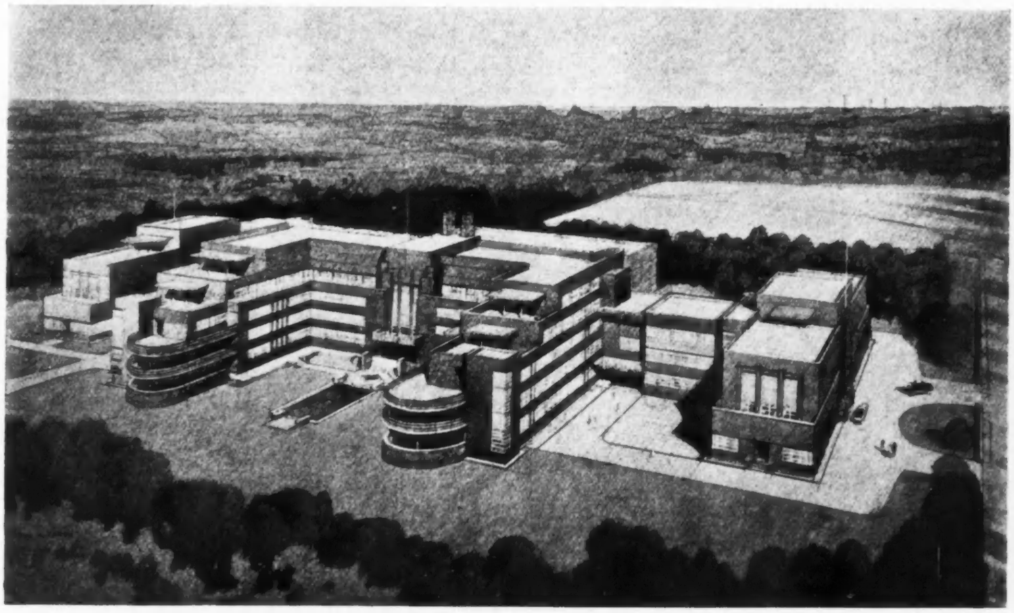


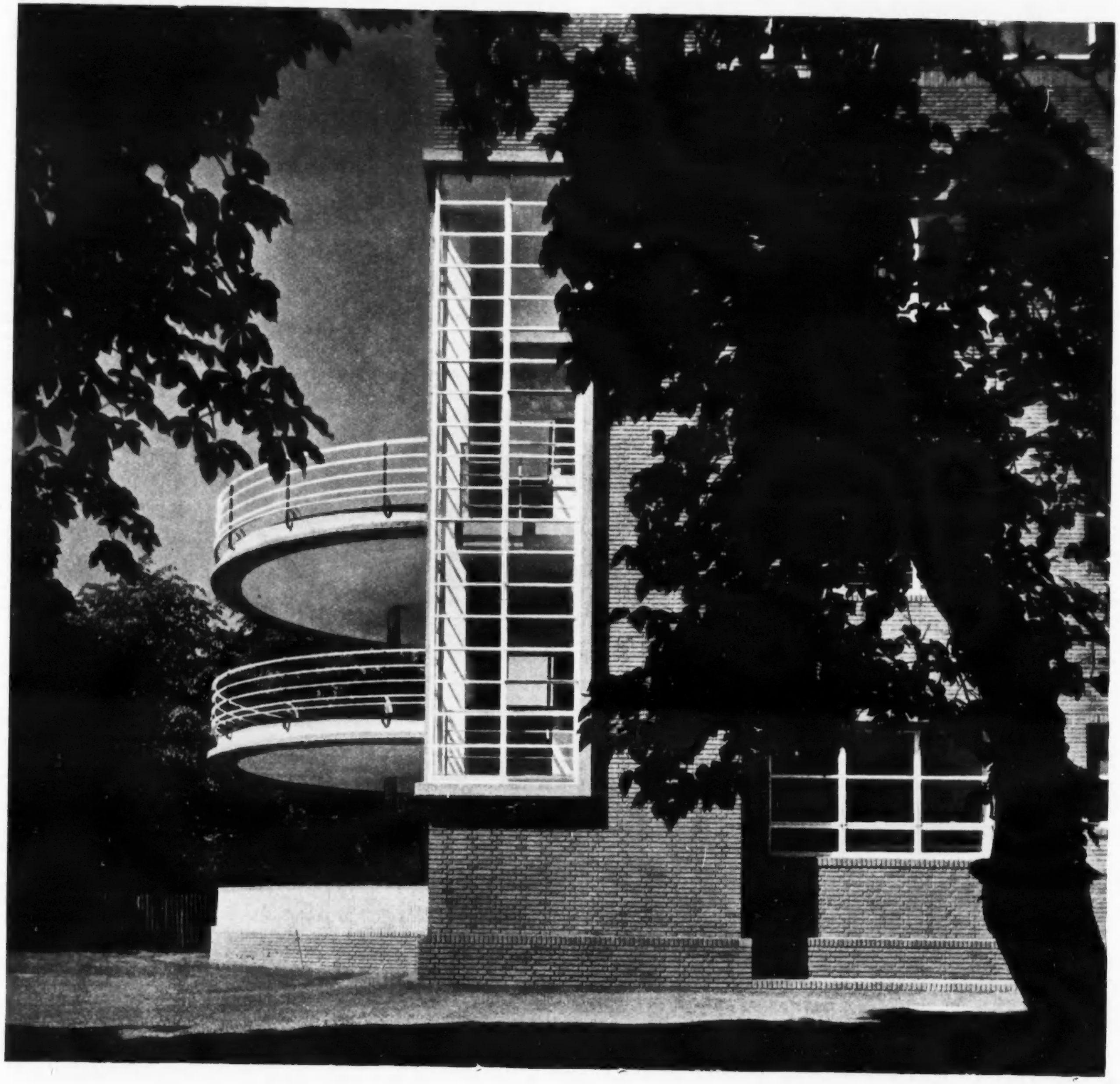
BLOCK PLAN

The Royal Masonic Hospital, Ravenscourt Park, London, W., was opened on July 12 by H.M. the King.

On the following ten pages are reproduced plans and photographs of three of the four units of which the hospital is composed: the Administration Block, the Electrical and Surgical Block and the Annexe. The construction of the entrance to the Administration Block is also illustrated in this week's supplement. In the next issue we propose to deal with the Ward Block, and details will be given of the lay-out of typical ward and sanitary units.

The architects for the buildings were Sir John Burnet, Tait and Lorne and the consulting engineer was Mr. S. Bylander.





The Hospital occupies a site of about four acres at the corner of Ravenscourt Park, West London. It consists of four blocks: the Administration, the Ward, the Surgical and Electrical Treatment and the Annexe Blocks. The last contains in its lower floors the mechanical and electrical controls. The four blocks are linked together by glazed passages.

All the buildings are of steel-frame construction with reinforced concrete foundations and hollow tile and reinforced concrete floors and roofs.

Owing to the fact that the permanent water level is only about 8 ft. below ground level, the excavation of deep basements was avoided. In the Annexe Block, where a shallow basement had to be constructed for the boiler house, there is a reinforced concrete tank to avoid flooding.

In conjunction with the foundations, tunnels have been constructed under the ground floor for the mechanical and electrical services. They also form a communication between the various blocks for the use of the mechanics in charge of heating, mechanical and electrical equipment and lift machinery.

The buildings are faced with 2-inch red bricks in Flemish garden bond with wide joints. The horizontal bands and balcony trimmings are of concrete.

The photograph on this page is of one end of the Ward Block, showing the sun balconies and escape staircase.

THE ROYAL MASONIC HOSPITAL

DESIGNED BY

Sir John Burnet, Tait and Lorne

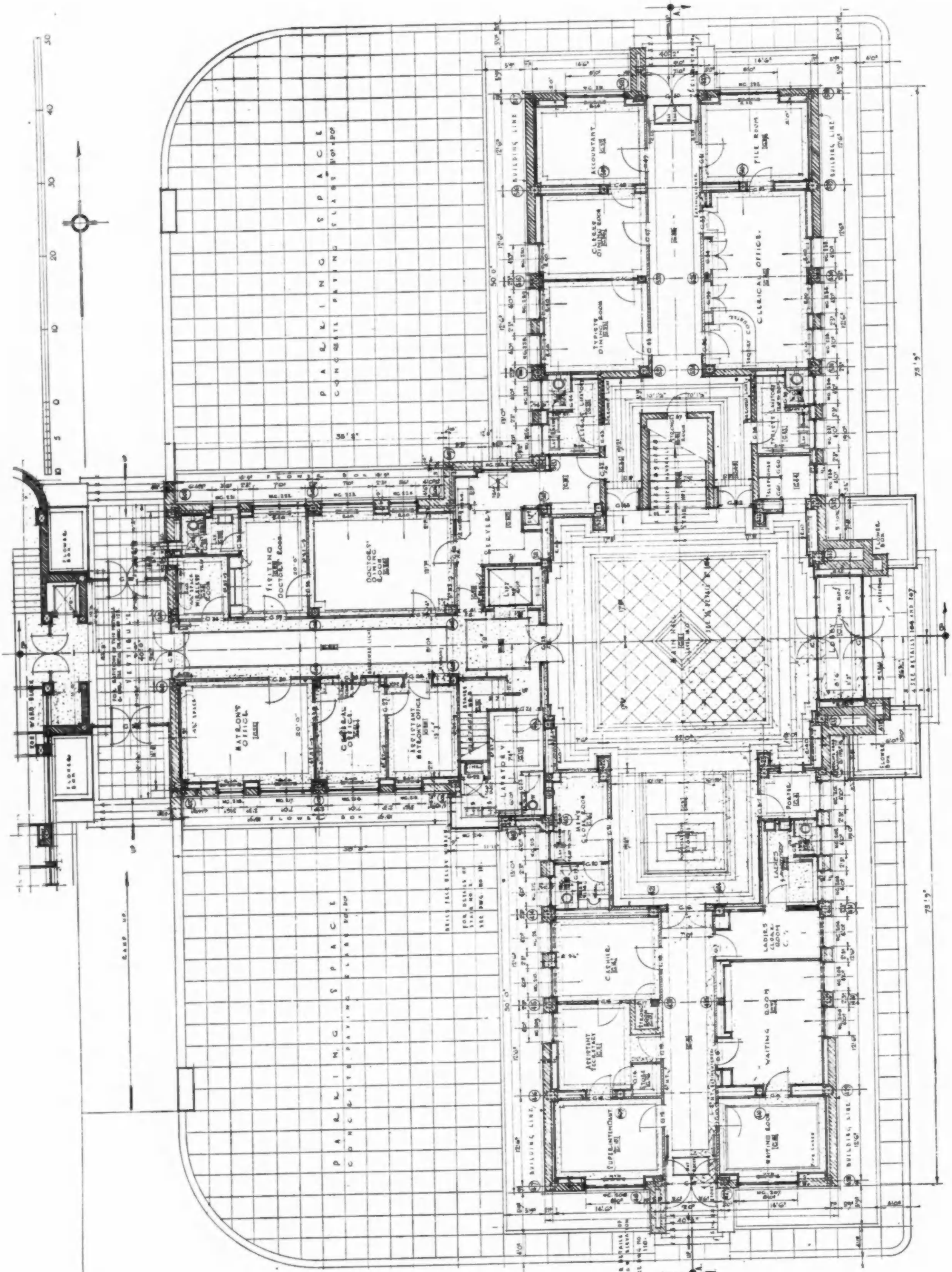
THE ADMINISTRATION BLOCK

The Administration Block is four floors in height and contains the secretarial and clerical offices, the board room, reception rooms for Hospital and Masonic functions and suites of rooms for the resident doctors, the matron and assistant matron.

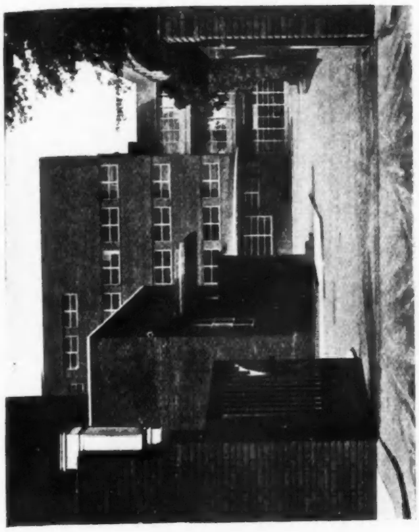
The central feature is the main hall, which extends through two floors. It is finished in Lunel marble, and the railings, etc., of the stair well are of bronze and stainless steel. The entrance is flanked with concrete flower boxes and has a concrete canopy with an exposed aggregate finish. An isometric drawing and further description of this entrance, with a section through the hall, comprise this week's supplement.

The two photographs above show: Left, the service staircase to the Administration Block (the stairs are in terrazzo with special non-slip insets); and, right, the back elevation showing the connecting link to the Ward Block and the doctors' and surgeons' entrance. The entrance is lined with terrazzo and bands of green glass tile.

On the following pages are given the ground and first floor plans of the Administration Block.

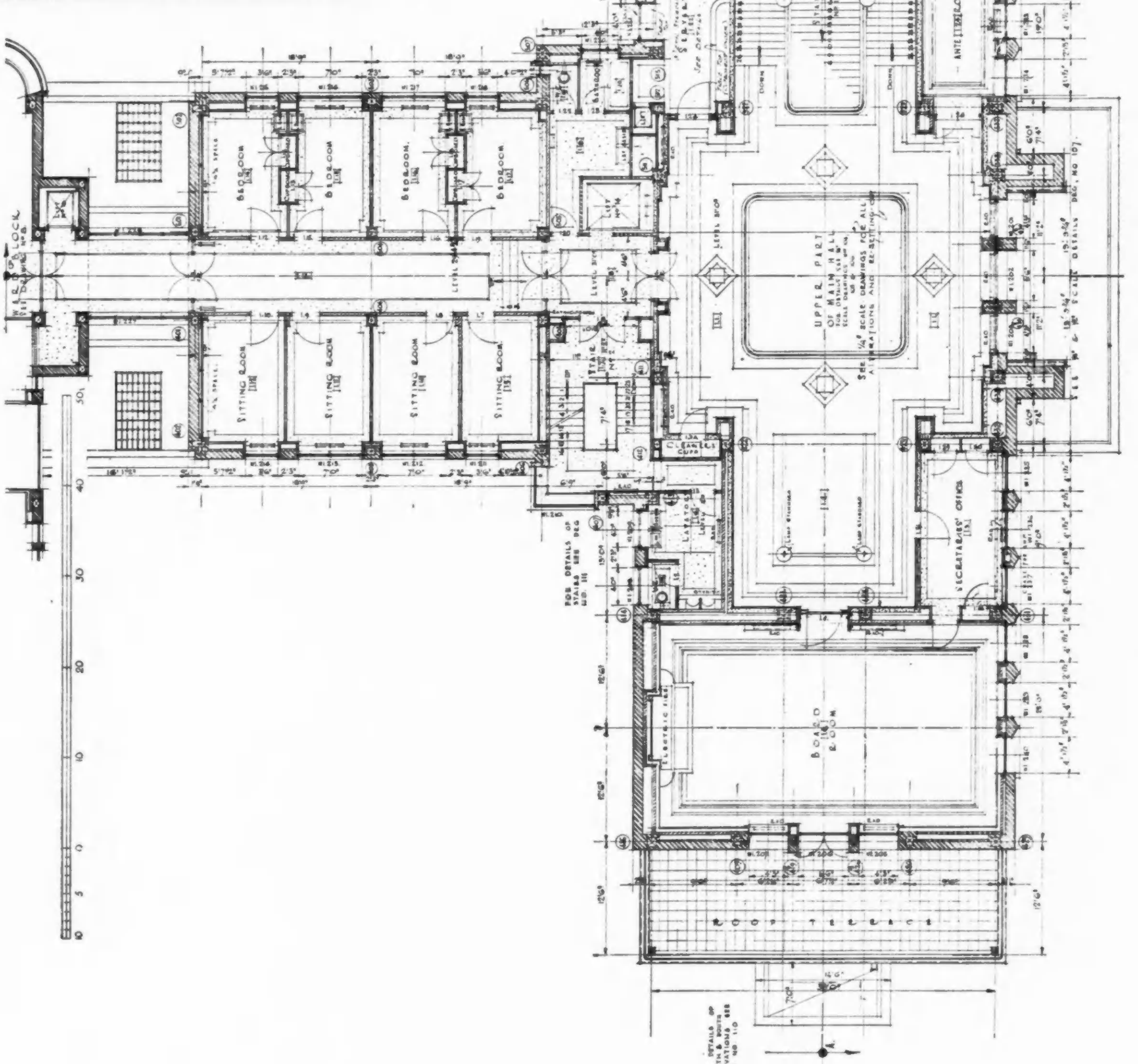

PARKING SPACE
CONCRETE PAVING SLABS
ACCOUNTANT
FILE ROOM
CLERKS' DINING ROOM
CLERICAL OFFICE
TYPISTS' DINING ROOM
DOCTORS' DINING ROOM
VISITING DOCTORS' ROOM
SERVERY
LIFT
MAIN HALL
MATRON'S OFFICE
CLERICAL OFFICE
ASSISTANT MATRON'S OFFICE
LAVATORY
MEN'S CLOAK ROOM
CASHIER
ASSISTANT SECRETARY
SUPERINTENDENT
WAITING ROOM
LADIES' CLOAK ROOM
LOBBY
POSTAL
FLOWER BOX
BUILDING LINE
RAMP UP
UP

Ground Floor Plan



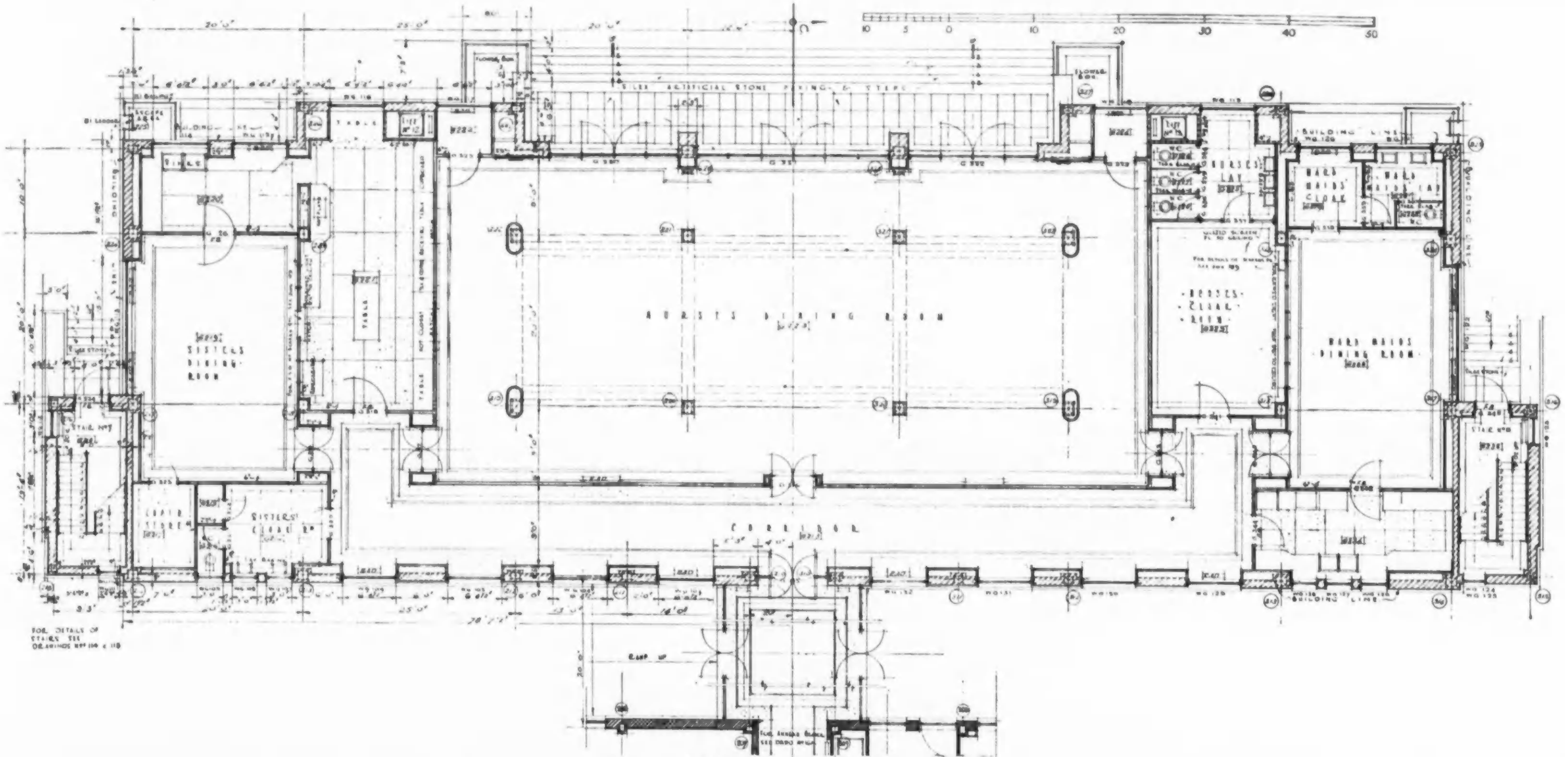
The side entrance to the Administration Block.

Ground Floor Plan

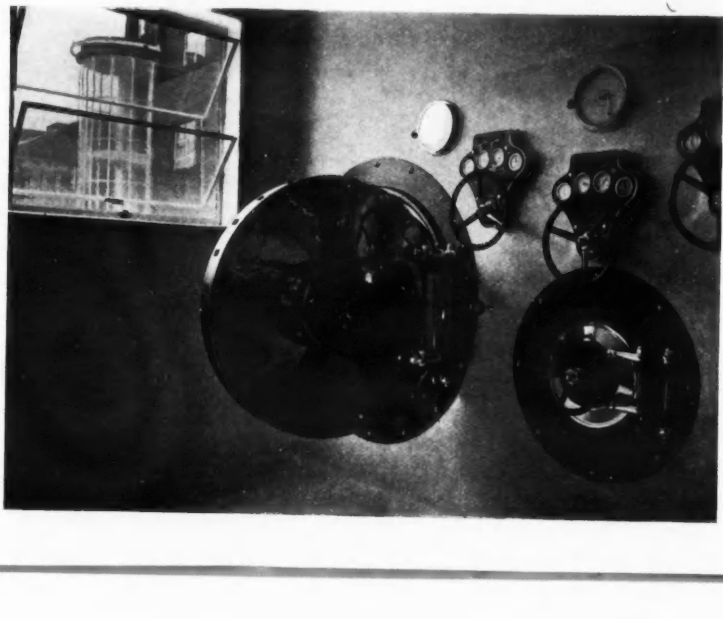

RECEPTION ROOM
STAIR
ANTE ROOM
UPPER PART OF MAIN HALL
SECRETARY'S OFFICE
BOARD ROOM
ROOF TERRACE
BEDROOM
SITTING ROOM
LAVATORY
CLEANER'S CUPD.
0
5
10
20
30
40
50

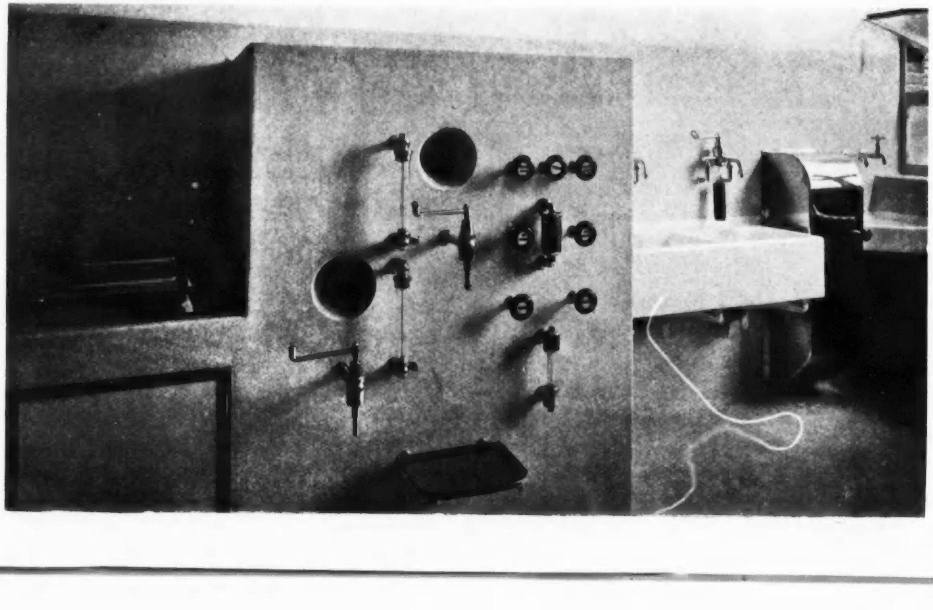
First Floor Plan

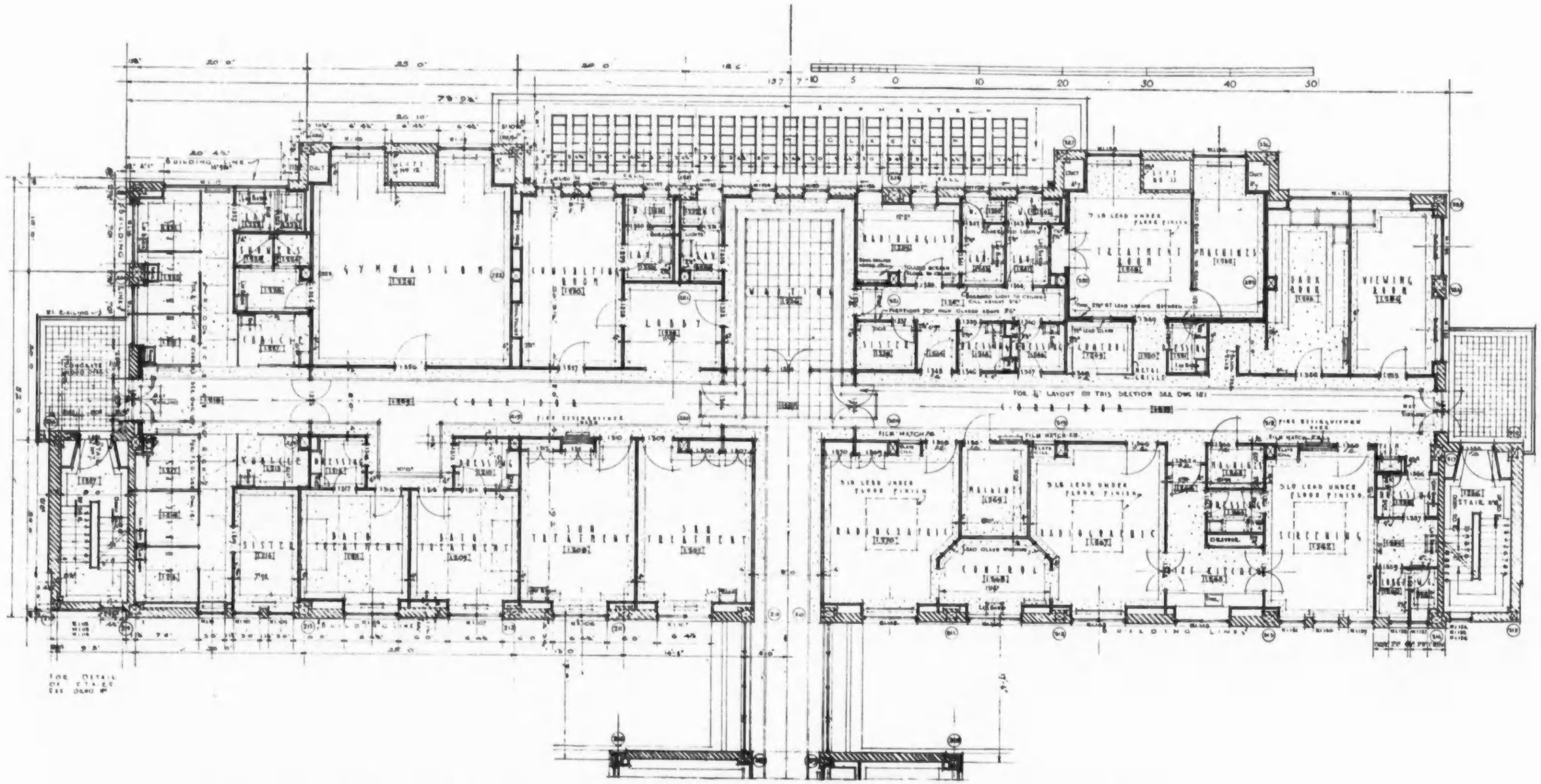
THE ROYAL MASONIC HOSPITAL : ADMINISTRATION BLOCK


10 5 0 10 20 30 40 50
TILED ARTIFICIAL STONE PAVING & STEPS
FLOWER BOX
BUILDING LINE
SISTERS DINING ROOM
SISTERS' CLOAK Rm
STAIR No 7
TABLE
NURSES DINING ROOM
CORRIDOR
NURSES LAV
NURSES CLOAK ROOM
WARD MAIDS CLOAK
WARD MAIDS LAV
WARD MAIDS DINING ROOM
STAIR No 8
GLAZED SCREEN FL TO CEILING
RAMP UP
FOR DETAILS OF STAIRS SEE DRAWINGS Nos 106 & 110

GROUND FLOOR PLAN





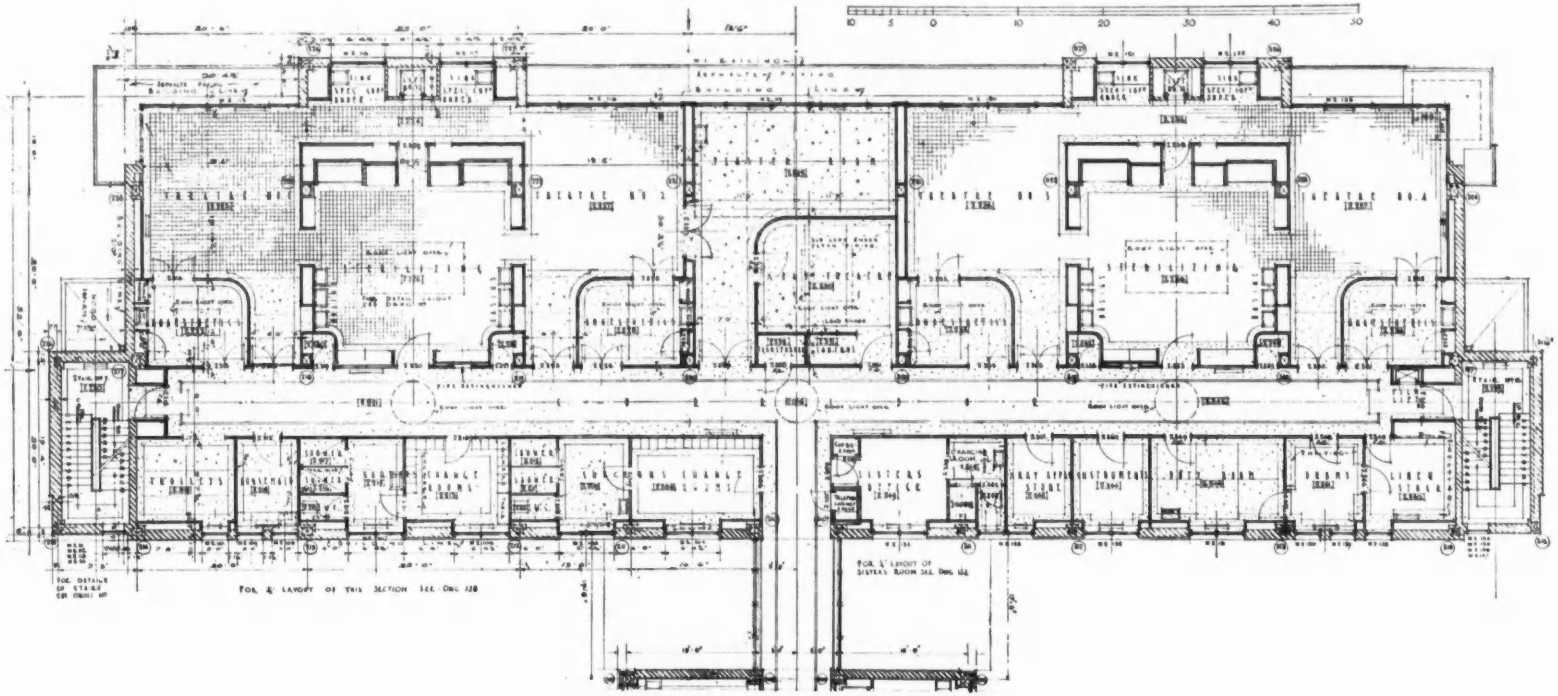

GYMNASIUM
CONSULTING ROOM
LOBBY
WAITING
CUBICLE
SHOWERS
LAV
W.C.
LIFT
DUCT
CORRIDOR
SISTER
BATH TREATMENT
SUN TREATMENT
DRESSING
CUBICLE
RADIOLOGIST
SISTER
TREATMENT ROOM
MACHINES
DARK ROOM
VIEWING ROOM
CONTROL
RADIOGRAPHIC
SCREENING
DUTY KITCHEN
STAIR
ASPHALTE
BUILDING LINE
FOR ¾" LAYOUT OF THIS SECTION SEE DWG 181
FIRE EXTINGUISHER
FILM HATCH
5 LB LEAD UNDER FLOOR FINISH
7 LB LEAD UNDER FLOOR FINISH
LEAD GLASS WINDOW
FOR DETAIL OF STAIRS SEE DWG
10 5 0 10 20 30 40 50

THE ROYAL MASONIC HOSPITAL SURGICAL AND ELECTRICAL BLOCK

Top: Ground Floor Plan Bottom: First Floor Plan

The Surgical and Electrical Block is three floors in height. The ground floor contains the dining-rooms and cloakrooms for sisters, nurses and ward maids. The first floor contains the departments for electrical treatment. Approximately equal space is given to the Radiological Department and the Physiotherapy Department. There is a separate system of cabling for these departments, providing for the different voltages required, and both alternating and direct current are supplied.

The photographs show typical examples of the hospital's internal equipment. The major part of the exposed equipment is in stainless steel. Left: a detail from the sterilizing room. The two sterilizers are for gloves and dressings. Right: Part of a typical sink-room, showing a small sterilizing unit, sinks, etc. The floors, dadoes and enclosures to the sterilizing equipment are in cream-coloured terrazzo. The walls above the dado and the ceilings are in hard plaster.


10 5 0 10 20 30 40 50
THEATRE No. 1
THEATRE No. 2
THEATRE No. 3
THEATRE No. 4
STERILIZING
PLASTER ROOM
X-RAY THEATRE
FIRE EXTINGUISHER
ROOF LIGHT OVER
SINK
SPEC. CUPBOARD
STAIR No. 1
TROLLEYS
HOUSEMAID
SHOWER
W.C.
CHANGE ROOMS
SURGEONS CHANGE ROOMS
SISTERS OFFICE
CHANGING ROOM
X-RAY APPS STORE
INSTRUMENTS
DIRTY ROOM
DRUMS
LINEN STORE
FOR ½" LAYOUT OF THIS SECTION SEE DRG 138
FOR ½" LAYOUT OF SISTERS ROOM SEE DWG 142
FOR DETAILS OF STAIRS SEE DRG.

THE ROYAL MASONIC HOSPITAL SURGICAL AND ELECTRICAL BLOCK

Second Floor Plan

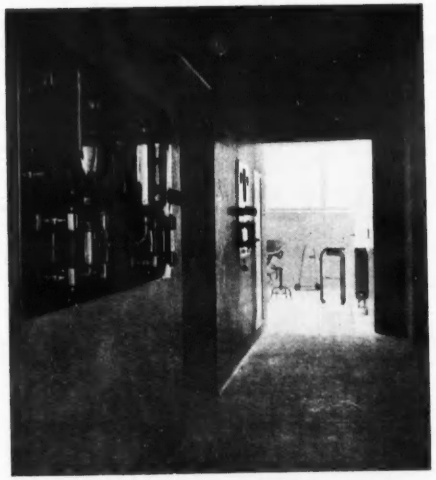
The second floor of the Surgical and Electrical Block contains the operating theatres with their ancillary rooms and offices.

The four theatres are arranged, for reasons of economy, in two pairs, each sterilizing room serving two theatres.

Between the two groups of operating theatres are a plaster-cast theatre and an X-ray theatre. On the other side of the corridor are the surgeons' changing rooms and the theatre sister's office.

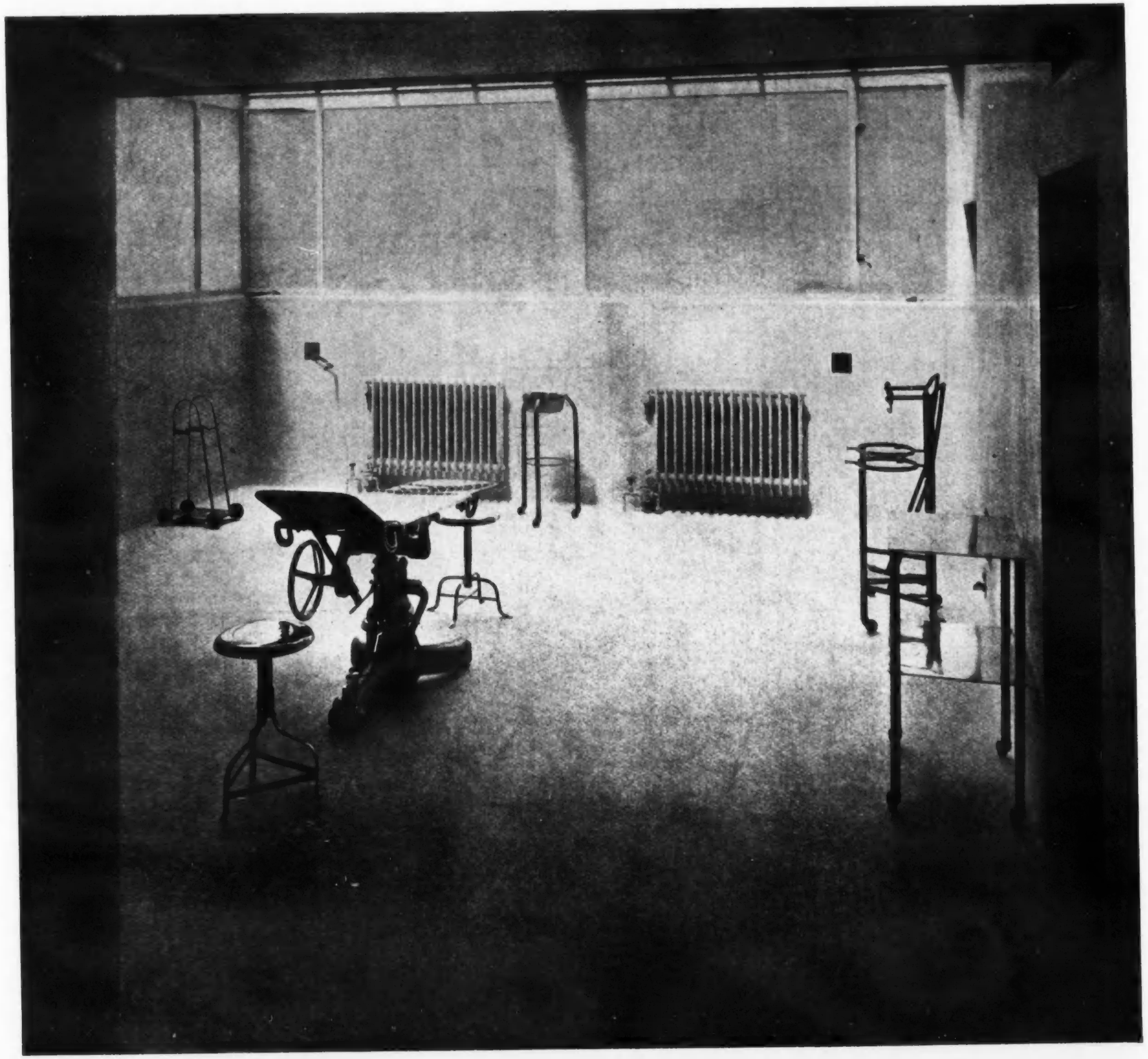
The operating theatres, which were designed in collaboration with the surgeons concerned, have a fully equipped air-conditioning and humidifying plant allowing twelve complete changes of air per hour. Conditioned air is maintained at the required temperature, and the provision of radiators in addition enables the temperature to be rapidly raised when required.

There is a separate lift-circulation in connection with the disinfecting plant in the basement. The lighting for the operating theatres is supplied from three independent sources, two from the supply company's mains and one independent storage battery. The change-over from one supply to another, in the event of a failure, is automatic. The sterilizing plant is of a type that is almost new to this country.

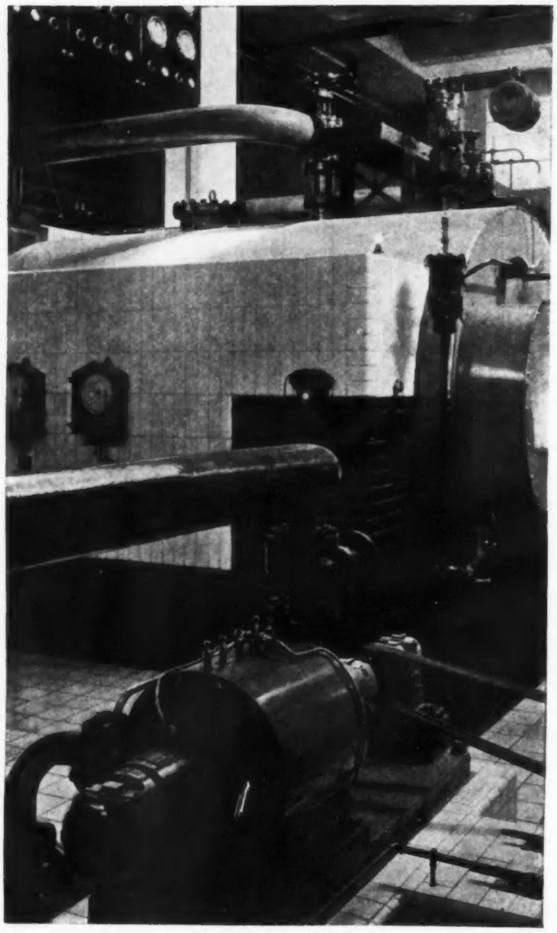


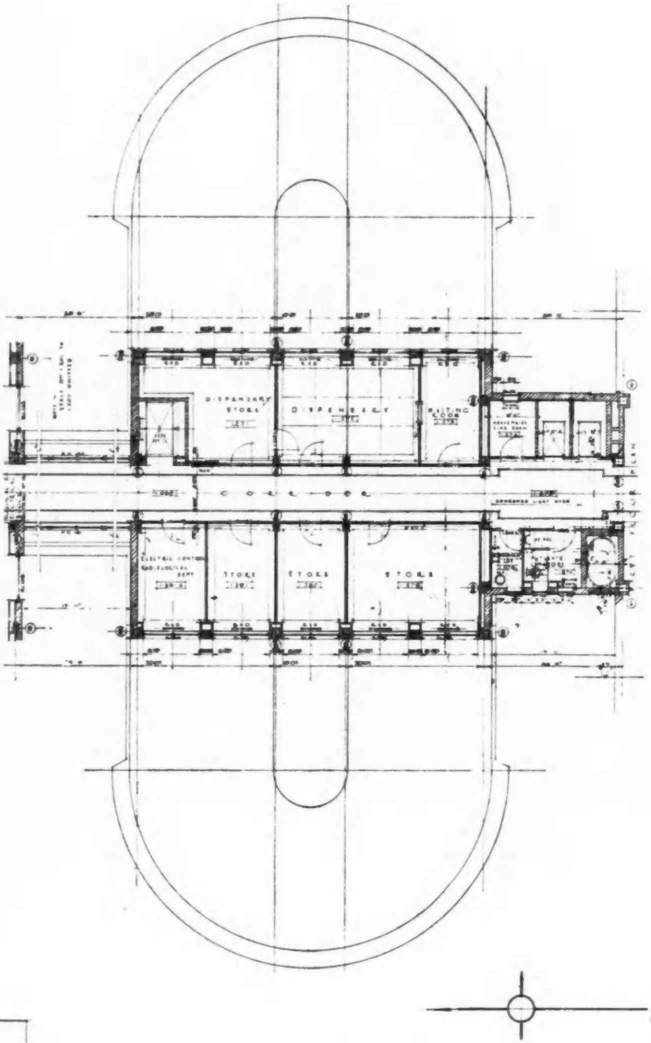
Looking into an operating theatre from a corridor on the second floor. See plan on facing page.

THE OPERATING THEATRES

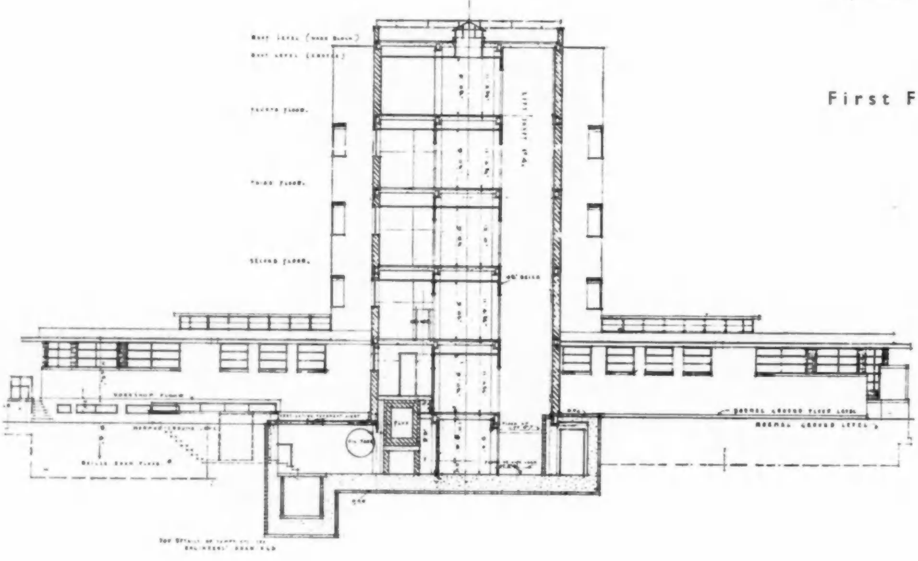


One of the four operating theatres, showing the door to the sterilizing room on the right. The floors and walls are in light green terrazzo and the ceiling is in hard plaster, painted with light green enamel. The fittings are in stainless steel.



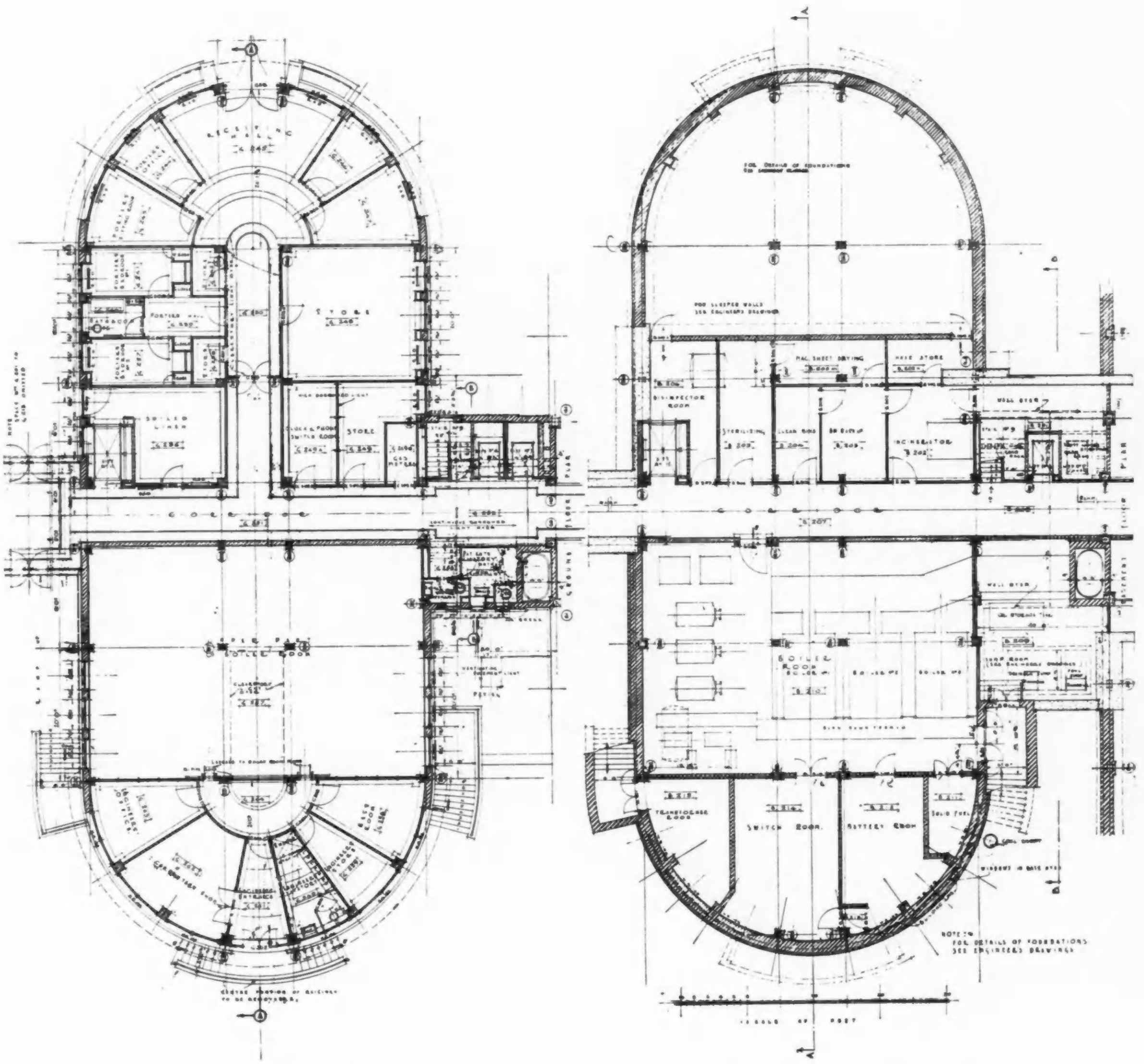

DISPENSARY STORE
DISPENSARY
WAITING ROOM
STORE
STORE
STORE

First Floor Plan



On this page are shown the first floor plan of the Annexe Block and a section taken through the connection link between the Ward and Annexe Blocks. The photograph shows a view in the interior of the boiler house.

THE ROYAL MASONIC HOSPITAL:


STORE
SOILED LINEN
STORE
BOILER ROOM
SWITCH ROOM
BATTERY ROOM
TRANSFORMER ROOM
SOLID FUEL
DISINFECTOR ROOM
STERILIZING
INCINERATOR
BOILER ROOM

Ground Floor Plan

Basement Floor Plan

ANNEXE BLOCK

The Annexe Block is five floors in height. The ground floor contains, on one side of the central corridor, the reception department for ambulance patients; and on the other, with the basement underneath this portion, the main boiler-rooms and the ventilation and electrical controls for the whole group of buildings. On the four upper floors are rooms common to both the Ward and Surgical groups, such as linen stores, sterilizing rooms for dressings and gloves, and the Dental department and Dispensary.

The boiler plant comprises economic type tubular boilers equipped with automatic oil firing, together with the necessary vacuum pumps and boiler-feed pumps.

The heating services are on the water-vapour principle, and the system is designed to allow any main or sub-main section of the building to be isolated. The whole of the condensate from the heating services, together with that from the services to cooking, sterilizing and air-conditioning apparatus, is drawn back to the boiler-house by means of vacuum pumps and discharged into a well for boiler-feeding purposes.

DESIGNED BY SIR JOHN BURNET, TAIT & LORNE

LITERATURE

LONDON SCENE

London Scene. By H. J. Massingham. London: Cobden-Sanderson. Price 10s. 6d. net.

MR. MASSINGHAM has chosen a difficult subject for his new book. What more *is* there to say about London? What there *was* to say has been repeated and repeated until it is no longer repetition but recitation—recitation of the kind that makes one feel positively ill.

Personal reactions are the only alternative to "Where to go and what to See." But there are limits even to reactions. Mr. Massingham reacts with a sustained conscientiousness which becomes almost a burden in those passages which are clearly not a labour of love, but his prose is always a pleasure to watch, like the innings of some village batsman who is a natural cricketer—a graceful clumsiness which has great flexibility.

Nevertheless, though there is nothing original in its conception, *London Scene* is one of the most "important" books of the year. In pre-war days Mr. Massingham shared a garret (or something of the sort) with Sir John (then merely J. C.) Squire Sir John is today England's greatest architectural publicist. There is no other person in the country who can get a piece of architecture saved or removed by a word at Temple Bar. One might almost go so far as to say that the revival of architecture as a subject fit for civilized people to live with dates from the day J. C. Squire. picked it up off the streets.

Yet he has never written about architecture so well as Mr. Massingham. Nor have those O so charming topographical writers who do Wanderer books and Haunts books and Nooks books.

London Scene is, in fact, the first piece of modern topographical writing which deals intelligently with architecture, and deals with it as something more than a Survival or a Revival. It is the first book I have read which shows that there are writers who can think about architecture much as architects and town planners do. It may surprise some people that the celebrator of Cotswold should show a contempory outlook. Me it does not surprise. A proper sense of tradition such as Mr. Massingham has shown himself to have, argues a proper feeling for what is alive. *London Scene* is socially important, and I am going to use the rest of my space by quoting from it, to show the sort of line it takes.

There happens to be just one place in London where I enjoy to drop in and swing a leg over a cup of tea. That is the Maison Barbellion, also in Bond Street, a tea-shop of such persuasive truce from getting and spending mobs that half an hour there is like a minute gone. Its balm issues from the quality neither of the tea nor its drinkers, but from the influences of its interior decoration. Like Crawford's Advertising Agency in High Holborn, it is the work of Frederic Etchells, who wrote an introduction to his translation of Le Corbusier's *Towards a New Architecture.* From his association with that battailous modernist, Mr. Etchells might perhaps have been expected to use his walls as banners for a holy war against all forms of building or decorating not his own. Maison Barbellion is quite free from any such showmanship. . . . The designer had no golden opportunity with the room itself, which is narrow, L-shaped and quite ordinary. His plans can have cost very little to execute, since his materials are as commonplace as the shape of the room. He eschews all ornament, he limits himself to the average necessities of a tea-room. Maison Barbellion is veritably a tea-room, not a boudoir. Is he not then a rare and original artist who can make an image out of the common dust of life to quicken the deeper delights of our consciousness? The Supreme Artist made woman out of a rib.

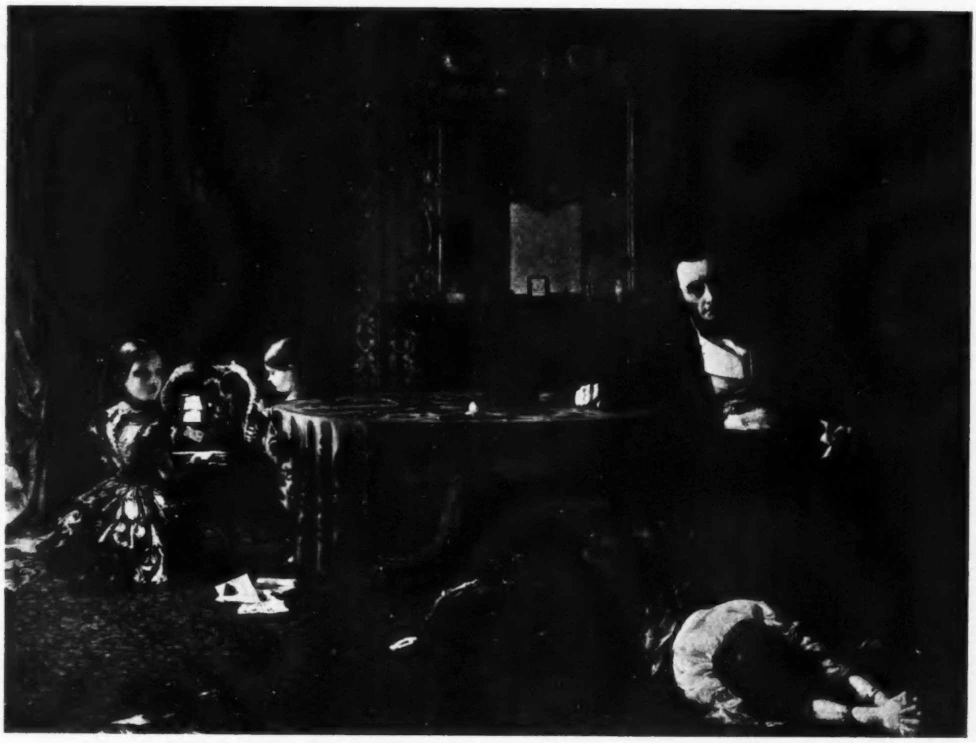
There were his room and his walls. These he covered with a rough distemper of very pale apricot. Their surface he broke up with a number of plain flat mirrors set in narrow frames painted the same colour as the walls. At certain intervals along the wall-space stood what looked like lustrous green columns but actually were a drapery of oiled silk, stiff and fluted, and oiled silk of the same colour were the curtains of the large window let into the base line of the L. Between mirrors and hanging were electric light bulbs hidden from a direct view by thin slabs and fans of a mother-of-pearl frosted glass. Half-way down the room was a recess roofed by a shell-like vaulting, like a tiny shrine, and this was repeated at the end of the room where it turned the corner. The bare ceiling was smooth-painted the same apricot tinting of the walls, and the contrast lay delicately in the difference of texture. Mid-way, two parallel square beams crossed by another, and all coloured the same apricot, interrupted but without abruptness the expanse of ceiling. The switches were set in a plain square nickel plate. That was all, but the greens and apricots came into lively communion with the room by the chairs being enamelled the same jade green as the curtains and hangings and the waitresses wearing dresses of jade green with aprons of that palest apricot.

That was all. No doubt the mirrors and painted ceiling were in the same ratio of costliness as a well-fitting woman's dress of line simple and severe. But taken as a whole and in comparison with the other interiors of Bond Street, Maison Barbellion must have counted out its pence against their pounds. Yet its beauty was as clear as a landscape's in which the forms of trees, hills, meadows and streams are in a relation of perfect adjustment to one another. The architectural serenity of Etchell's interior was won by a simplicity which contained within itself a series of balancings studied from the spacing between beams and ceiling, and between mirrors, lights, hangings and recesses. Each of them would have smudged the purity of the whole had it been shifted an inch to left or right. They were not just nice things in a room; they were neighbourly. The room was unified by these rightnesses of proportion and as true as the accentual beat and intimate structure of a sonnet. But intricacy played its secretive part behind the appearance of gladdening simplicity. For the mirrors were of different shapes and sizes, yet each a contribution to the general concord. . . .

Etchell's interiors, though severe, are never contemptuous of the human element that occupies them, as is much of "modern" architecture and sculpture. In all his work, he seems to say, "What do you want? Very well, you shall have it." But other sculptors and architects who go in for being "modern" seem to build and carve for a race of robotized Titans, not for our fragile selves. . . .

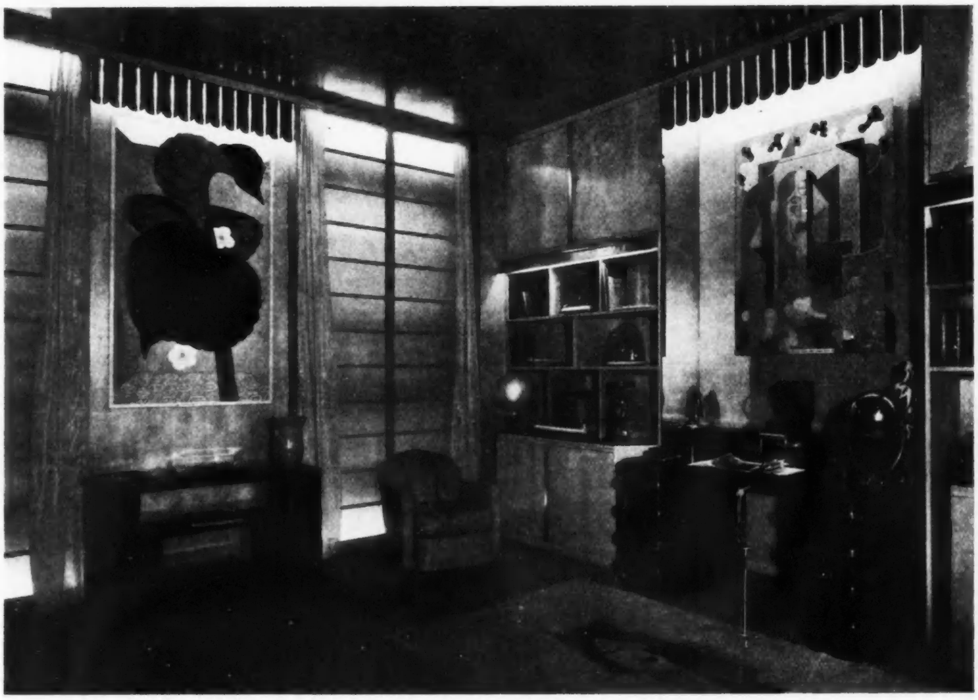
Nor was I impressed by the beauty of individual houses, offices or churches. Surely in no other ancient capital in Europe are there so few noble buildings conspicuous to the eye. I did not need to be told that Wren's town-planning vision, mapped a few days after the Great Fire, had been squashed by makeshift. Nothing nowadays can be seen even of the less ambitious design he carried out of interrelating the fifty and more churches he rebuilt. Acres of sad and slovenly streets, huge industrial dumps like the litter of barbarous Titans and gloomy blocks of contemporary flats and offices have thrust into his broad-based conceptions. You see little enough now of the mighty fleet of Wren with their top-gallants and mainsails of stone.

Still less is attention caught by variety of styles and periods. In a bird's-eye view of London, the Victorian era holds its architectural own against the pretentious Edwardian and the imposing but undiffer-



PAST AND PRESENT

From the painting by Mr. Egg—from LONDON SCENE.



ANCIENT AND MODERNE

The Exhibition at Fortnum & Mason's—from LONDON SCENE *by H. J. Massingham.*

entiated, space-filling style of today which is neither plain nor ornate, standardized nor particular, and cannot make up its mind whether to be “ modern ” or classical or both . . . .

The face of London is changing so irresponsibly that its own citizens of ten years back would hardly recognize their local habitations. But there is neither purpose nor control nor aforethought nor deliberation in the campaigning of the new against the old. Chance and not the citizen rules the change . . . .

But the chaos of London's architecture seems to reflect the bewilderments of our modern life from within. It is destroying an old world without reconstituting a new and tramples over the ruins of fixed principles with no star in east nor west to guide its course . . . .

I made a point of going twice to see Fortnum and Mason's exhibition of interior decoration this month. On my way up the stairs, I was heartened and mollified of what may be irrational prejudice in my view of this great shop as catering only for the rich by reading the word “ contemporary ” and not “ modern ” decoration. Evidently these people knew what they were talking about. Most people who talk about “ modern decoration ” and “ modern architecture ” usually mean a bit of applied jazz . . . .

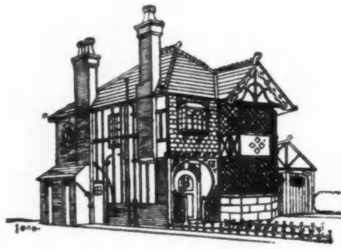
The painted tin and *papier mâché* flowers, used both in alabaster pots and to embellish the wall-lamps, excited no response from me. Resembling genuine flowers too closely, they at once became fakes. The only excuse for artificial flowers—apart from the fact that Cézanne painted from them—is that they shall be as unlike real ones as is consistent with the organic forms of petal and stalk. The real flower can always go one better than the sham. That is why “ Flower Decorations, Ltd,” stock the best artificial flowers in London. They are man- (or woman-)made flowers, not imitations of natural ones. The only way in which we moderns can, artistically speaking, go back to nature, is by deriving inspiration from her basic structural forms, not violating the law of materials by transferring her finished products into another medium . . . .

How good too were the shapes of the armchairs, and I was by no means cast down by the absence of those chairs on legs of thin bright steel which are in vogue today or will be tomorrow. These chairs, often seated with leather, are neither expensive nor uncomfortable except to the mind. On them you could only think thin thoughts, thoughts that squeaked like bats and moved like spiders, just as the old upholstered chairs caused leg-o'-mutton thoughts, dolefully fatted. It is surprising what difference the chair he is sitting on can make to a man's mind.

I cannot agree with Mr. Massingham about the chairs—but never mind. He writes about the things that ought to be written about, that in any decent society *are* written about—the only things that distinguish down- from town-land man.

ADAM BETHELL

WHAT IS TO BE DONE ABOUT THIS?



[*This is the last of the series of articles that we have been publishing under the above title. In it is discussed the responsibility of the architect; what he ought to have done and what he should be able to do towards raising the standard of design in domestic building, particularly in the type of building that is now largely left in the hands of the speculative builder—the small suburban house.*—ED., *A.J.*]

17. Where the Architect Fails

[BY A LAYMAN]

> “ England today is urban-minded, though possibly with less conviction than ten years ago. Nevertheless the very powerful middle-class, particularly its lower members, is solidly urban. It thinks in terms of semi-detached villas with garages; of saloon cars and week-end motor rides along arterial roads; of wireless; of central heating and every other gadget for the protection of man from the weather and the horror of thinking. He is a product of the industrial age, and to me is our greatest tragedy and our greatest problem. He is responsible for the suburban development of all our towns.”
>
> GEOFFREY CLARK

AT the present time we all live in such a welter of confused ideas, that it is difficult to disentangle the warp and woof of the fabric of modern life.

If you study the passage from Mr. Clark's recent address to the Institute of Sociology, I believe it is possible that you may get a clue as to where the greatest failure of the modern architect lies—Modern Suburbia, for the most part, is a disgrace, and particularly it is the architect's disgrace.

Now in saying this, I do not wish to imply that the architect merits any particular blame, but rather to emphasise the fact that the failure of the suburbs is chiefly architectural. What deeper failure the architectural failure represents is a case for a pathological or sociological enquiry, and is outside the scope of this article.

During the nineteenth century the main purpose of the architect was to re-discover the lost art of beautiful building, and he therefore became more and more of a traditionalist, and less and less of an experimentalist; the most artistic of architects ceasing in fact to be even realists.

Now in becoming a traditionalist he naturally and normally moved in the direction of, what we may call for convenience, the aristocracy, though to-day the “ upper class ” is becoming more and more difficult of definition. This class so important socially and politically at the beginning of the nineteenth century, was the natural custodian of the arts, and here the architect found immediate appreciation and encouragement of his services, and particularly of his services as an architect of tradition. This attitude still further tended to confirm him in his opinion that he was on the right path, and as long as he held to it professional and social success were assured. At the same time he was possessed by a dreadful uncertainty; parallel with his beautiful country houses and Gothic revival churches, was a mass of purely utilitarian building, particularly in the industrial centres, which haunted him like a bad nightmare: here he was impotent and powerless, and the Engineers and Speculative Builders, whose best efforts were a mocking imitation of his own, reigned supreme. Now mark Mr. Geoffrey Clark's words: “ the very powerful middle class,” for the class has been growing in strength all through the passing years, until today it reigns supreme practically throughout Europe and America.

In the nineteenth century the more successful members of the middle class were open to the ameliorative influence of the upper class, and adjusted their architecture and manners accordingly, but with the passing of the power from the upper classes, the middle section of society has become more and more self-assured, and less and less dependent on cultural direction from above. It has, at the same time, become more enlightened and more confirmed in its Philistinism.

With the Great War the balance of power shifted even in the middle class itself. Owing to a variety of reasons, mostly economic, the wealth of the country became more evenly spread, and the lower middle class became the chief motivating power of the nation. The present economic crisis has accentuated this movement, until today the only part of the building trade which is at all normal in its operations, is that part which we describe as "Speculative."

Now I have tried to show that the architect, though he understands the need of the traditionally cultured classes and their dependants, is by training and tradition of all men the least able to appreciate the wants and aspirations of the lower middle class, whom he regards, I suggest, æsthetically as a class of "Untouchables." Now if it is true, as a distinguished engineer said the other day, that "architecture is a dying art"—and I believe he added the words "Thank God," then this, I submit, is the real reason.

Yet the architect, under the lash of the economic whip, may say in all humility—"but there is nothing I should like better than to help this lower middle class in the task of reclaiming its awful suburbs—but how can I do it—it doesn't like my work, the Speculative Builder won't employ me"—and the poor architect is bewildered to find a way out.

Now what is this Class, so alike, and yet so alien to his own—which is the product of the industrial age. It consists of the small tradesman, the clerical classes of the great cities, the superior artisans, and the better-paid working-class man; its members in their upward march provide "Heads of Departments" in the great stores and insurance companies, the foremen and managers of factories, and the directing powers of Industry generally. They are for the most part excellent citizens, they believe in well-ordered family life, and they are essentially practical and efficient: they correspond to the N.C.O.'s of a regiment, with this difference, that they are in the main providing the recruits for the "Officer Class," that is the "Officer Class" of industry. Not a very interesting or inspiring class to the artist, and yet here I believe is his finest material and his greatest opportunity.

Again, turning to Mr. Clark: "It thinks in terms of semi-detached villas with garages; of saloon cars and week-end motor rides along arterial roads; of wireless; of central heating and every other gadget for the protection of man from the weather . . ." In other words, his chief concern with his house is its efficiency.

He requires a house that will function properly, and he, or rather she, for it is usually the wife who counts more than the husband in these cases, wants hard wood floors, no mouldings, plate glass windows, fire-places easy to clean, and, above all, a plan which meets her social requirements.

The success of the semi-detached villa with garage, or space for garage at the side, with its two sitting-rooms, one in the front and one at the back, with its small but well-planned and equipped kitchenette, its three bedrooms and its tiled bathroom, more exactly meets the need of the more humble middle-class man than any house that the average architect attempts to provide for him—and this is the house that the speculative builder builds in thousands all over the country—the speculative builder has studied the habits and needs of his client and the architect hasn't, and this is the secret, or the partial secret, of his failure.

Quite recently two distinguished architects have addressed the public (the nebulous body as difficult to define as "the man in the street"), and have tried to persuade them that in the one case it was better for them to have one large sitting-room than two small ones, and in the other that the old-fashioned kitchen with a scullery was much better than the sitting-room and the kitchenette! Now the small clerk or well-to-do mechanic lives in one sitting-room, with all its shabby furniture, its wireless sets, dog-basket, etc.—It is the meal-room, the children's nursery, the father's workshop; the front sitting-room is the room of ceremony, where the clever child does his home-work, where the young people do their courting, where family re-unions are held, and where distinguished visitors, such as the parson and the doctor, are received. It looks on to the street where the life of the community is to be observed, and not on to the garden or backyard, which is more often than not as untidy as the back sitting-room.

Now how does the average architect set out to deal with these requirements. If he is of the older generation, he will probably try and persuade his client that what he really wants is something mildly Tudor or Elizabethan—that "charming Cotswold cottage touch"; or if he is middle-aged, then something austerely Georgian will be much more suitable; whilst our poor little "Kipps" listens in humiliation and thinks of plate-glass windows and central heating! Here, says the youthful modernist, is where I may be of help. I believe in efficiency, in plate-glass windows and all the rest. But, alas! our friend "Kipps" is very sensitive socially, he has not the courage (though he may have courage of a very high order in other directions) to make experiments in the way of living or design, so the flat roofs and strangeness of modern architecture frighten his herd instinct.

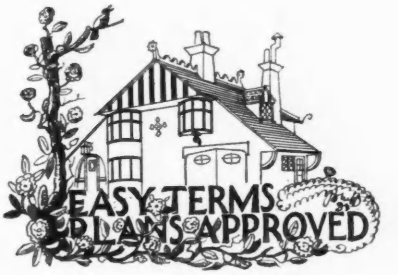
I feel, however, as a layman, that progress must lie along modern lines. Modernism has been described as "the villa made vocal," and on the materialistic side it would appear to provide for all the villa dwellers' requirements. It is not within my province or competency to find the architectural solution, but I am convinced that if architects, whom I regard as more necessary at the present moment to the social welfare of the community than any other profession, will only study the problem I have tried to present, they will have no difficulty in arriving at a solution.

EDITORIAL NOTE

We do not altogether agree with our contributor about the culpability of the architect; and it may seem, since this is the last article of the series, that we are finishing on an unsatisfactory note.

We hope to begin next autumn, however, a new series on similar lines showing what the architect has *Done About*

THIS



The following is a list of the articles that have appeared in the series now ending:—

(March 29) 1. The Speculative Builder, by Penates; (April 5) 2. The Speculative Architect, by Edwin Gunn; (April 12) 3. Building without Guidance, by Stanley C. Ramsey; (April 19) 4. What the Public Want, by Edwin Gunn; (April 26) 5. The Housing Problem, by Percy Morris; (May 3) 6. The Building Centre Competition, by E. Maxwell Fry; (May 10 and 17) 7 and 8. How the Architect can use the Building Societies, by H. C. Burdett; (May 24) 9. The Housing Act, by our Parliamentary Correspondent; (June 1) 10. Building Society Finance, by Penates; (June 8) 11. Factors in Cost, by L. J. Gollop; (June 29) 12. The Pre-fabricated House, by Penates; (July 6) 13. Standardized Woodwork, by E. Maxwell Fry; (July 13) 14. An Essay in Co-operation, by N. Martin-Kaye; (July 20) 15. Advisory Architectural Panels, by C. Birdwood Willcocks; (July 27) 16. The Gappy Lay-out, by Thomas Sharp.

QUESTIONS THAT ARISE

Absorbency of Roofing Tiles

¶ R. C. K. writes: "*I have recently built a large bungalow in the country for a client who depends entirely on rainwater for his water supply. Unfortunately the sand-faced tiles used on the roof are somewhat absorbent and do not throw the water off for a considerable time. An ordinary heavy shower seems to have practically no effect. My client is growing very anxious as to his supply being adequate. The tiles are only recently burnt. Can you inform me as to whether they are likely to weather and vegetate so as to overcome this difficulty, or would it be possible to treat the roof with some damp-proofing solution which would tend to throw off the water, but would not contaminate the supply?*"

Undoubtedly the absorbency of the tiles will decrease in time, but ordinarily a half-hour's shower will fail to contribute anything material to storage. I should be very chary of applying any of the colourless damp-proofers to the roof—they are mostly more or less soluble, and would tend also to retard the natural process of vegetation and pore-filling.

E. G.

Natural Finish for Internal Plastering

¶ C. J. B. writes: "*Can you tell me whether for domestic wash, internal plastering can be so executed as not to require any distempering or similar colour treatment, but left its own natural colour, and if so, how one should specify for such plastering. Would sharp arrises in this case be undesirable, and is it best to execute the work in lime and hair or in sand and cement?*"

I have carried out several houses finished in the manner suggested, though it may be supposed that eventually the ordinary accumulation of atmospheric dirt will make distemper desirable. The most important (and difficult) thing is to ensure freedom from the dents, chips, bruises and similar injuries which joiners, plumbers and fitters are wont to inflict upon plastered surfaces when completing interior work in their several trades. "Making good," however carefully performed, will be painfully apparent with a bare plaster finish, and must be avoided. This means completion of all work which can possibly be so done (such as fixing chimney pieces) before the final coat of plaster is applied. Apart from this it is not necessary to vary any ordinary plastering specification which will give the desired finish. I personally prefer a lime and sand finish from the wood float, omitting the final setting coat of plasterer's putty, and specifying Buxton chalk lime one part to clean *yellow* sand three parts. All arrises should be softened and the undercoat may be gauged with cement. The finish in this case will resemble the colour of parchment and the texture should have a slight sheen if the surface is sufficiently scoured with the float. It is sometimes found that for some months after completion, sand particles become detached from the wall surface, and make rooms gritty; in one case where this occurred the walls were sized and matt varnished, which cured the trouble and looked quite well.

E. G.

Garage Floor on Clay Soil

¶ T. W. M. writes: "*Would one of your experts inform me what has been found by experience to be the best flooring for a garage on clay soil. Is it sufficient to lay an ordinary cement concrete floor—Pudlo, say, 6 ins. thick on a good dry rubble foundation, or is a special mix necessary, other than the Pudlo, to withstand the oil and petrol and prevent cracking and dusting. It is for a private hire service garage and the floor would not be therefore subject to any severe shocks.*"

If the floor is of any size I should be disposed to reinforce it with an open-mesh fabric such as is used in most modern concrete roads. This should prevent sinking and cracking. Disintegration and surface dusting can be prevented

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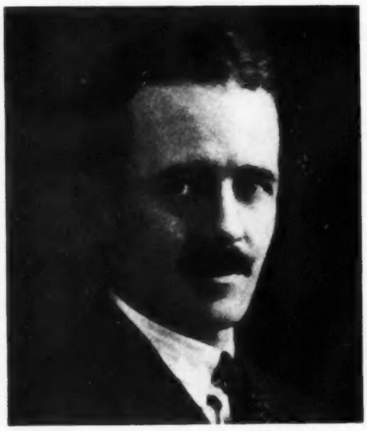
OUR SECRETARIES

• 7 •

HAROLD E. TODD

WESSEX SOCIETY OF ARCHITECTS



MR. HAROLD E. TODD entered the profession as an articled pupil to Mr. W. H. Watkins, F.R.I.B.A., of Bristol, with whom he remained for five years. He became an Associate of the R.I.B.A. in 1916 and, during the latter eighteen months of the war, he served in the Ministry of Munitions in connection with the construction of explosives factories. He has been in practice in Bristol since 1921 and is now senior partner in the firm of Todd and Thompson.

Mr. Todd has been secretary of the Wessex Society of Architects since 1926, and assisted in the arrangements for the R.I.B.A. conference that was held in Bath in 1928.

by a surface dressing, when first hardened with a proprietary hardener, or with ordinary water-glass solution—which may require periodic renewal. A dusting of sal-ferricite on the screeded finish is another alternative.

LAW REPORT

ALLEGED DEFECTIVE PLASTER

Alliance Economic Investment Co., Ltd., v. *Shelley.—King's Bench Divisional Court. Before the Lord Chief Justice and Justices Avory and Humphreys*

THIS matter came before the Court, by way of appeal, on a case stated by the Kensington Justices, against an order made under the Public Health (London) Act, 1891, to abate a nuisance created by defective plaster, etc., on premises in Beaufort Street, Chelsea, of which the Alliance Economic Investment Co., Ltd., were the lessees. The respondent was the inspector of nuisances, who had laid the information, and who now alleged that it had not been complied with.

Mr. H. W. Patton, for the Alliance Economic Investment Co., Ltd., said that the Justices held that the company were responsible to abate the nuisance. His clients let the premises in 1918 to a tenant under an agreement for three years at £60 a year, which was raised to £94 a year under the Rent Acts, 1917–1925, the tenant remaining in possession as the Statutory tenant. The agreement contained a covenant by the tenant to do certain repairs. The tenant's reply was that the agreement terminated in 1921, when she became a statutory tenant. Counsel said the appellants case was that the notice to abate the nuisance should have been served upon the tenant or the person through whose default the nuisance arose. It was not the appellants' fault that caused the nuisance, and further the notice could not be served upon appellents, unless the tenant could not be found. After arguments in the Court below the Justices came to the conclusion that by raising the rent the appellants became responsible for the whole of the repairs and therefore, as the nuisance existed, it was for the appellants to abate it. Counsel's submission was that the Justices had arrived at a wrong conclusion and that the appeal should be allowed.

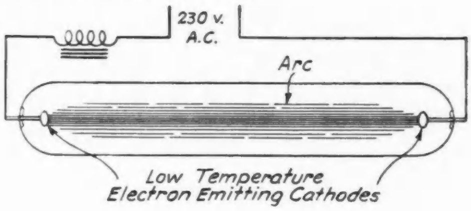
Mr. Gilbert J. Paull appeared for the respondent.

The Court dismissed the appeal with costs.

The Lord Chief Justice said in his view the Justices had made a plain finding and he thought there was ample material on which they could have arrived at the decision they did.

Mr. Justice Avory concurred and pointed out that when the increase of the rent was made, it must be assumed that it was made pursuant to proper notice under the Rent Acts, 1917–1925. The form set out in the schedule was as follows:—"The increase under heading 'd' is on account of my responsibility for repairs, for no part of which are you expressly liable." The form also contained the statement that where the tenant was under express liability for part of the repairs the increase under heading "d" was to be settled, in default of agreement, by the County Court. It was not suggested that this had been done and therefore it followed that it must have been made on the terms that the liability for repairs was accepted by the appellants.

Mr. Justice Humphreys agreed.



TRADE NOTES

BY F. R. S. YORKE, A.R.I.B.A.

A New Electric Lamp

THE new hot-cathode gas discharge lamps have, I understand, opened up possibilities for greater efficiency and better distribution and definition in illumination than could be obtained with normal metallic-filament lamps.

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The progress in practical development has been accelerated during the past few years; but it was actually half a century ago, in the course of early endeavours to produce the incandescent filament lamp, that the practical discovery of thermionic emission from hot cathodes was made. The incandescent filament lamp was only four years old when, in 1883, Edison patented "the Edison effect": the "effect" being the passage of electricity from the hot filament to an electrode inside the lamp.

In some of the modern gas-discharge lamps the filaments are designed, not to produce light, but particularly to emit electrons which ionize and excite radiation from the gases in the bulbs; the gases becoming the actual light sources.

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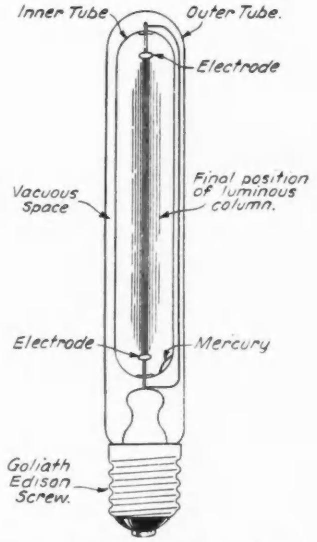
The B.T.H. Company and its associates have worked for several years on various forms of cathode and cathode devices, and one of the most recent problems has been the design of a normal voltage lamp in which the high pressure arc could be developed in an elongated form, employing efficient electron-emitting cathodes, and requiring no extra circuit components, such as cathode heating transformers or starting devices.



Diagrammatic illustration showing the constructional details of the Mazda Mercra lamp.

The lamp resulting from their research work has been named the Mazda Mercra. It is a 400-watt lamp of high visual efficiency, giving a colour rendering that makes it specially suitable for street lighting and floodlighting.

Its principal characteristics may be summarized:—

It employs no heated filament.

The light emanates from metallic vapour at high pressure.

It is a gas discharge tube containing a rare gas enabling it to start on ordinary mains voltages.

Its efficiency is approximately three times that of the normal incandescent filament lamp.

The lamp itself is enclosed in special glass, surrounded by a vacuum jacket to conserve heat.

It fits into a standard socket and requires only a simple series choke to render it suitable for any a.c. circuit.

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There were many practical problems to be solved before the high-power gas-discharge lamp became a practicable light source capable of operation on the usual voltages, but lamps have now been constructed in the form shown by the diagram in the centre column. The hot cathodes are of the self-exciting electron-emitting type, i.e. they are heated only by the energy of the discharge; and the high temperature of the vapour necessary for the efficient production of the light is maintained by surrounding the inner tube (containing the electrodes and the metallic vapour) by a vacuum jacket.

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It is especially interesting to observe the changes in the form of the arc and the luminous output when the lamp is first switched on and is quickly heating up. At first the lamp is filled with a uniform pale blue glow. As the temperature rises and the vapour pressure increases, the luminous column leaves the walls of the tube and narrows down until finally it appears as a brilliant narrow cord in the centre of the tube. It is at this final stage that the luminous output is high.

Spectrographic records of Mazda Mercra lamps have been taken during this rapid warming up process, and the progressive increase in the red radiation is clearly indicated. The lamps need a small stabilizing choke in series with them, and the power factor can be corrected readily by means of a condenser. The efficiency of the lamps is approximately 40 lumens per watt.

Gangway Lighting

The Major gangway lighting system is designed for simple installation, involving a minimum of inconvenience in the theatre whilst it is being fitted. Special attention has been paid to economy in first cost and current consumption.

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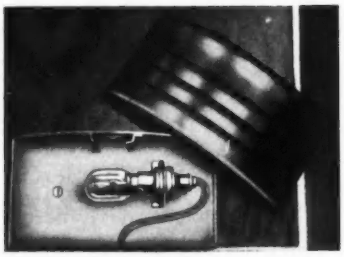
The lighting boxes are fixed to the sides of gangway seats and the louvred fronts are detachable. The louvres are arranged to distribute light, unobtrusively, where it is most needed, so that whilst patrons may find their seats easily, the attention of those already seated is not distracted by glare.



The Major louvre gangway light, with cover removed.

The boxes are of cast iron, and are drilled for fixing and for ¾ in. conduit entry. They contain brackets carrying S.E.S. or S.G.C. lamp-holders for 15 watt or 20 watt lamps. On the coloured Erinoid light, on the upper horizontal surface of the box, the letter or number of the row is indicated.

●

Finished in chromium, the fitting costs 5s. 10d. It is obtainable, also, in other, less expensive, finishes.

Gas Panel Heaters

A new flueless gas heater, made by Sidney Flavel, depends for its high radiant efficiency upon a flat, dead black surface, which emits more radiant heat than a series of tubular columns of equal superficial area. The heater is fitted with volumetric burner jets which automatically control the flames and compensate for variation in pressure of gas supply.

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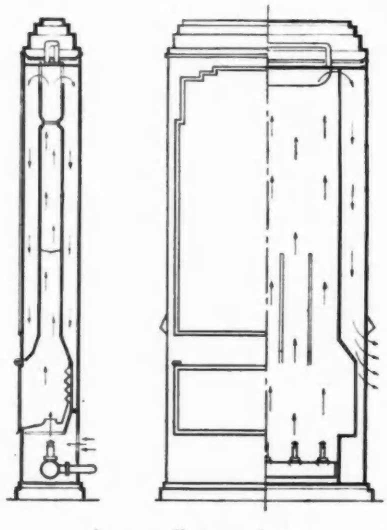
It is made in three models : *Utility*, *Period* and *Moderne*. *Utility* is quite straightforward in design, *Period* appears to be a late offspring of Adam ; a general uncertainty attaches to the word *moderne* ; as exemplified here it has evidently nothing to do with *modern*.

THE BUILDINGS ILLUSTRATED

The following is a list of the general and some of the sub-contractors for the Royal Masonic Hospital, Ravenscourt Park, W.6, illustrated on pages 130, 139–149 and supplement.

General contractors, John Mowlem & Co., Ltd. Quantity surveyors, Gardiner and Theobald. Consulting mechanical engineer, J. Stinton Jones. Consulting structural engineer, J. Bylander. Clerk of works, J. G. Camp. Sculptors, Gilbert Bayes, Charles L. J. Doman (marble sculpture). Sub-contractors : Ashwell and Nesbit, Ltd., heating, ventilation and hot water supply ; Joseph Avery & Co., blinds and curtain rails ; Automatic Electric Co., Ltd., house telephones ; Armstrong Cork Co., Ltd., cork flooring ; Bainbridge and Bain, runways ; J. D. Beardmore & Co., Ltd., curtain rails ; British Vitrolite Co., Ltd., mirrors and splashbacks ; Crittall Manufacturing Co., Ltd., metal windows and doors, lanterns, etc. ; T. Clarke & Co., Ltd., electrical ; Cope & Co., tiling ; Clark, Hunt & Co., Ltd., false ceilings ; Compton Bros., granit glass ; Coronet Brick Co., Ltd., facing bricks ; Cement Marketing Co., Ltd., cement ; Candy & Co., Ltd., stove interiors ; Diespeker & Co., Ltd., constructional floors and terrazzo and wall and floor tiling ; Dorman, Long & Co., steelwork and welded steel balconies ; A. J. Elvin, demolition ; Jos. F. Ebner, wood block floors ; Educational Supply Association, Ltd., dispensary fittings ; East Anglian Cement Co., Ltd. hydraulic lime ; Expanded Metal Co., Ltd., expanded metal ; Emerson and Norris, Ltd., sundials and casting of figures ; Fenning & Co., Ltd., marblework ; T. and W. Farmiloe, Ltd., glazing ; W. J. Furse & Co. (London), Ltd., lightning conductors ; James Gibbons, Ltd., ironmongery ; Granite Paving Co., Ltd., granolithic work ; J. W. Guthrie and Andrew Wells, painting and acid etched window ; Gent & Co., Ltd., clocks ; Highways Construction Co., asphalt work ; Haskins, shutters ; Matthew Hall & Co., Ltd., plumbing ; Ham River Grit Co., Ltd., cartage ; Theodore Hamblin, Ltd., ophthalmic apparatus ; Ilford, Ltd., viewing lanterns ; J. A. King & Co., Ltd., pavement and roof lights ; Leeds Fireclay Co., Ltd., sanitary ware ; Lion Foundry Co., Ltd., w.i. railings, etc. ; London Brick Co. and Forders, Ltd., Fletton bricks ; Marryat and Scott, Ltd., lifts ; F. G. Minter, Ltd., doors ; Manlove Alliott & Co., Ltd., sterilizing apparatus ; McGruyer Hollow Spar Co, Ltd., flag pole ; Geo. Parnall & Co., Ltd., joinery, metal handrails and balustrades ; J. M. Pirie & Co. (London), Ltd., metalwork in architraves, doors, balustrades and gullies ; Charles Smith & Co., Ltd., ironmongery ; St. Albans Brick Co., Ltd., facing bricks ; J. H. Sankey and Son, Ltd., partition blocks ; John Tann, Ltd., strong room doors ; Samuel Williams and Sons, Ltd., artificial stone ; John Wood, Ltd., ruboleum ; A. D. Young, Ltd., plastering ; Benjamin Electric, Ltd., and Troughton and Young, Ltd., light fittings ; Davey, Paxman & Co., Ltd., boiler makers ; General Electric Co., Ltd., electrical equipment ; Zeiss Ikon, Ltd., special light fittings ; Quasi-Arc Co., Ltd., welding ; Pel, Ltd., steel furniture ; Cox & Co., over-bed tables ; Turner, Lord & Co., board room, reception room and recreation room furniture and curtains ; Mander Bros., Ltd., paint ; Benham and Sons, Ltd., kitchen equipment for main and ward kitchens, etc. ; Robert Adams, Victor spring hinges.



A new radiant gas heater

Trade Items

The British Thomson-Houston Co.'s new factory at Rugby for the manufacture of home electrical appliances, such as refrigerators, washing and ironing machines, cookers, boilers, and immersion heaters—exemplifies the principle of mass production at its best, and our representative, who visited the works recently, formed the opinion that this method of production was combined with the highest possible quality and finish.

All these domestic appliances have been evolved on scientific lines, and their design and performance reflect the technical skill one is accustomed to associate with the company's products.

Advantage was taken of the opportunity to see the great machinery halls in which industrial power plant is made and also the Mazda lamp works.

It may be mentioned that B.T.-H. refrigerators are marketed by the International Refrigerator Co., London, while sales of B.T.-H. Rugby-made washing machines, cookers, etc., are effected in this country through the Hotpoint Electric Appliance Co., Ltd., Newman Street, Oxford Street, London.

*

Messrs. Haskins, 9 Blackhouse Lane, Walthamstow, E.17, have sent us a copy of their latest catalogue, which illustrates and describes Rolador steel rolling shutters. It is stated in the foreword that nothing is left to chance in the manufacture of the shutters ; although assembled in the main from components produced on the " mass " principle, each shutter installation is carefully considered by a highly trained technical staff to obtain exactly the correct gear and balance ratios which, when applied, result in the shutter being perfectly balanced. They are also said to be especially suitable for the closure of openings in abbatoirs, air cooling towers, bakeries, banks, boiler houses, bonded warehouses, docks, factories, garages, generating stations, markets, motion picture studios, omnibus depots, lift and staircase openings, power houses, railway sheds and stations, strong rooms, shop and store fronts, and all other door and window openings in commercial, public and domestic buildings.

The shutters can be fitted singly in openings up to 50 ft. wide by almost any height and are operated manually (push-up), mechanically by endless hand chain or crank handle, or electrically.

Copies of the booklet are obtainable on application to the firm at the address given above.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

The L.C.C. is to erect five-story tenements in Vassall Road, BRIXTON, at a cost of £120,000.

Plans passed by the COULSDON U.D.C. : 20 houses, extension of Reddown Road, for Mr. E. B. Clarke ; six houses, St. Andrew's Road, for Messrs. Johns and Freeland ; two houses, Brigstock Road, for Mr. H. S. Griffiths : two houses, Netherne Mental Hospital, for Messrs. Hodgson, Dixon and Quick ; 10 houses, Alexander Road, for Messrs. G. H. Dibblin, Ltd. ; club premises, Brighton Road, for Mr. E. B. Clarke ; two houses, Winifred Road, for Mr. E. Witton Booth ; two houses, Alexander Road, for Mr. W. Ingram ; dairy, Chipstead Valley Road, for Mr. W. Woodlandhouse ; new streets, Coulsdon Heights Estate, for Firmus Construction, Ltd.

Plans passed by the CROYDON Corporation : Seven houses, Waddon Road, for Mr. W. Clark ; nine houses, Glen Gardens, for Mr. P. Richardson ; alterations and additions, 179–181, Portland Road, for Messrs. Holtum and Green ; addition to church hall, Brighton Road, for Mr. E. H. Bullock ; two houses, Mitcham Road, for Messrs. Wates, Ltd. ; alterations and additions, St. Andrew's Church School, Church Road, for Messrs. Rees and Partners ; alterations and additions, "Wilton Arms" public-house, High Street, Thornton Heath, for Mr. W. F. Foster ; 55 houses, Malden Avenue, for Messrs. Steel and Howes ; workshop, Willett Road, for Mr. F. Ashwood ; lay-outs, Brooklyn Estate and Sunny Nook Estate, for Mr. J. R. R. Oddy ; eight bungalows, Gladeside, for Mr. A. Pym ; parish hall, St. James' Road, for Mr. T. F. W. Grant ; two houses, Sandilands, for Mr. C. H. Ridge ; five houses, Bridle and Ash Roads, for Mr. F. Matthews ; workshop, Sunnycroft Road, for Messrs. Foss Bros. ; conversion into three flats, 42, Addiscombe Road, for Mr. E. A. Cleaver ; alterations and additions to shop, 12, Gillet Road, for Mr. W. Crowhurst ; alterations and additions, 54–56, North End, for Mr. D. Hamilton ; rebuilding "The Roebuck" public-house, Old Town, for Mr. C. R. Riches.

Plans passed at EALING : Four houses, Westlea Road, etc., for Mr. R. S. Rimmington ; two houses, Ravenor Park Road, for Mr. H. E. Webb ; 30 houses, Bridgewater Road, for Houselands, Ltd. ; two houses, Church Road, Northolt, for Mr. A. T. Bowden ; 44 houses, Rosedene Avenue, etc., for Messrs. Ruddock and Meighan ; 24 houses, Rydal Crescent, for Mr. A. E. Murdock ; five houses, Bydorp Gardens, for Mr. W. Gardner ; two houses, Cuckoo Dene, for Messrs. Tucker and Warren ; two houses, Niagara Avenue, for Mr. W. Gardner ; 294 houses, May Gardens, Lily Gardens, Primrose Way, etc., for Wembley U.D.C. ; three shops, The Broadway, for Messrs. Hall-Jones and Partners ; 12 flats, Queen's Drive, for Messrs. Douglas Smith and Barley ; block of flats, Hastings Road, for the Housing Corporation of Great Britain, Ltd. ; four houses, Rydal Crescent, for Messrs. R. Lancaster and Sons ; four bungalows, Marnham Crescent, for Messrs. John Maxwell & Co. ; 47 houses, Rydal Crescent, for Messrs. B. Smith and Son, Ltd. ; four houses, Hill Rise, for The Unity Building Co. ; block of flats, Hamilton Road, for Messrs. Sowrey Bros. ; 13 houses, Beaufort Road, for Messrs. Haymills, Ltd. ; warehouse, rear 11, Boston Road, for Messrs. MacDonald and Son ; additions, Hanwell Hospital, for Messrs. Dodge and Reid ; block of flats, Eaton Rise and Montpelier Road, for Messrs. W. H. Read & Co., Ltd. ; conversion of office to house, and alterations to United Dairies depot, Hanger Lane, for Mr. F. T. Dear ; conversion into flats, 6, Aston Road, for Mr. J. E. Watts ; conversion into flats, 16, Welgarth, for Messrs. Pipe and Hunt.

The L.C.C. is to extend the nursing and staff accommodation at the FULHAM Hospital, at a cost of £9,940.

The GREENWICH B.C. is to erect 85 cottages in Victoria Road, Charlton, at a cost of £39,000.

The L.C.C. is to complete the development of the HONOR OAK estate, by the erection of seven four-story blocks of dwellings of modified type, at a cost of £59,620.

The L.C.C. is to reconstruct three bridges at a cost of £189,000, in connection with the scheme for the improvement of the approaches to the London Docks.

SOUTHERN COUNTIES

Plans passed by the BOURNEMOUTH Corporation : Additions, Bournemouth Steam Laundry, Littledown Road, for the Bournemouth Steam Laundry Co., Ltd. ; four houses, Draycott Road, for Mr. W. J. Chapman ; shop, Linden Road, for Mr. E. C. Tonge ; two houses, Palmerston Road, for Mr. E. W. Lancester ; conversion into four flats, "Michelgrove House," Michelgrove Road, for Mr. C. V. Miller ; additions to laundry, 1, Leaphill Road, for Messrs. Thompson and Shaw, Ltd. ; six shops (amended plan), Pokesdown Hill, for Mr. Wallis ; four houses, Harting Road, for Messrs. C. Garrett and Sons ; two houses, Charminster Road, for Mr. J. J. Elkins ; four shops, Christchurch Road, Pokesdown, for Mr. V. Smeed ; 11 bungalows, Evershot Road, for Mr. W. J. Clapcott ; four houses, Ashford Road, for Mr. J. N. Hardy ; two houses, Corhampton Road, for Mr. F. Holt ; four cottages, Wimborne Road, for Mr. J. C. Tarrant ; two shops, Christchurch Road, for Mr. E. E. Pragnell ; church, Draycott Road, for the Rev. M. O'Riordan ; shops, offices and flats, Tuckton Road, for Mr. C. Williamson ; additions, St. Christopher's School, Wimborne Road, for Miss D. J. L. Widlake ; church hall, Braidley Road, for St. Stephen's Parish Church ; three houses, The Grove, for Mr. A. F. V. Holly ; parish hall, Holdenhurst Road, for the St. John's Church Council ; six flats, Grove Road, for Messrs. G. W. and D. H. Harrocks.

Plans passed by the PORTSMOUTH Corporation : 10 houses, Kirby Road, for Mr. J. J. Canterbury ; four houses, Goldsmith Avenue, for Mr. S. Pearce ; two houses, Stride Avenue, for Mr. A. W. Stevenson ; four houses, Copnor Road, for Mr. G. Wallis ; laundry extensions, 42–48, Kingston Crescent, for Messrs. J. Croad, Ltd. ; shop and flats, 93–97, Palmerston Road, for Mr. J. P. Hall ; bank extensions, Commercial Road, for Barclays Bank, Ltd. ; three houses, Priory Crescent, for Mr. J. May ; shop and store, Devonshire Square, for Mr. F. J. Privett ; eight houses, Second Avenue, Farlington, for Messrs. G. H. Denne, Ltd. ; 10 houses, Hawthorn Crescent, for Messrs. G. and W. Mitchell ; six houses, Havant Road, for Messrs. McCormick and Son ; two houses, Station Road, Drayton, for Mr. S. J. Liddell ; additions, 101–3, Eastney Road, for Messrs. Hastead Bros. ; eight houses, Maylands Avenue, for Messrs. J. May and Son ; eight houses, Brecon Avenue, for Mr. H. R. Horsey ; school extensions, Waverley Road, for Messrs. John Lay & Co. ; six houses, off Widley Road, for Mr. W. E. Ekers ; 13 garages, St. Chad's Avenue, for Mr. F. W. Devenish.

SOUTH-WESTERN COUNTIES

The BRISTOL Corporation is to invite tenders for the erection of a swimming bath at Shirehampton at a cost of £28,000.

Plans passed by the PAIGNTON U.D.C. : Additions, Croft Hotel, Hyde Road, for Mr. R. G. Farmer ; two houses, South Hill-side Road, for Mr. R. J. Yeo ; 28 bungalows, Dunstone Park, for Mr. J. Maunder ; 76 houses, off Blatchcombe Road, for Messrs. L. J. Boyce, Ltd. ; lay-out of land, Brixham Road, for the Western Counties Brick Co., Ltd. ; alterations and additions, Walwood Lodge, Torquay Road, for Mr. W. G. Tremeer ; two houses, Marine Parade, for Mr. S. G. Boultwood ; six flats, Manor Road, for Mr. W. Pearcey ; four bungalows, Saltern Road, for Mr. E. Isaac ; two houses, Saltern Road, for Mr. W. E. Rumbelow ; six houses, off Preston Down Road, for Mr. W. T. Coates.

MIDLAND COUNTIES

Plans passed at CHESTERFIELD : Six houses, Peveril Road, for Mr. S. Sales ; lay-out of land, off Mansfield Road, Hasland, for Messrs. Brown and Turner ; two houses, Brimington Road, for Mr. J. Glithro ; four houses, off Newbold Road, for Mr. L. W. Crossley ; conversion of Ryehill House, into two houses, Chatsworth Road, for Mr. J. Hibbert ; six houses, Morris Avenue, for Mr. L. W. Crossley ; two houses, Avenue Road, for Mr. W. Bargh ; alterations to premises, Packers' Row, for Messrs. E. Woodhead and Sons, Ltd. ; alterations and additions, Congregational Hall, Chatsworth Road, for the trustees of Brampton Congregational Chapel ; 60 houses, new street, off Whitecotes Lane, for Messrs. H. Thomas & Co. ; two houses, Walgrove Road, for Mr. A. E. Herring ; two houses, Langer Lane, for Messrs. Ervine & Co. ; two houses, Langer Lane, for Mrs. A. Brocksopp ; two houses, Mansfeldt Road, for Mr. S. G. Wells ; additions to offices, Sheepbridge Works, for the Sheepbridge Stokes Centrifugal Castings Co., Ltd. ; four houses, Handley Road, for Mr. Frank Durham ; extension to Sunday school, Station Road, New Whittington, for Whittington Parochial Church Council.

Plans passed by the KIDDERMINSTER Corporation : Garage and flat, Foley Park, for Mrs. L. Matthews ; road off Gheluvelt Avenue for Mrs. L. Millar ; works extensions, Duke Street, for Messrs. Tomkinsons, Ltd. ; six houses, Roden Avenue, for Mr. W. Lindley ; public house, Sutton Park Road, for Wolverhampton and Dudley Breweries, Ltd. ; two houses, Sutton Park Road, for Mr. A. W. Ryder ; house and shop, France Road, for Messrs. P. Hall and Sons ; alterations, weaving shed, Green Street, for Messrs. T. and A. Naylor, Ltd. ; alterations, Opera House, Comberton Hill, for Messrs. Roberts and Jones ; extensions, carpet store, Hurcott Road, for Messrs. W. and R. R. Adam ; 12 houses, Wolverhampton Road, for Mr. B. Denning ; extensions, St. John's Institute, Crowther Street, for Mr. W. Warder ; 20 houses, Hoo Road, for Mr. G. W. Williams.

NORTHERN COUNTIES

The BLACKPOOL Corporation is seeking sanction to borrow £9,000, for the purchase of land on the Pembroke estate, for the erection of baths.

Plans passed by the BLYTH Corporation : Sixteen flats, Plessey Road, for Messrs. Beany and Townsend ; four houses and four flats, Princess Louise Road, for Messrs. J. Goulding and Son ; dairy, 69, Newcastle Road, for Mr. Andrew Best ; six flats, Princess Louise Road, for Mr. J. E. Dover ; eight cottages, Robert Street, for Mr. R. Baxter ; two cottages, Barrass Avenue, for Mr. Andrew Best.

Plans passed by STRETFORD U.D.C. : Sewering and formation, Lindum Road, etc., for Sir Humphrey E. de Trafford, Bt. ; eight houses, Welney Road, for Messrs. Smith and Allcock ; 67 houses, Braemar Avenue, for Messrs. E. and J Slater ; six houses, Urmston Lane, for Mr. J. Kinsey ; house, King's Road, for Messrs. Littler and Rich ; 11 houses, Manor and Westwood Roads, for Messrs. Freeman and Evans & Co. ; 10 shops and houses, Barton Road, for Mr. J. Maunders ; extension to premises, Textilose Road, for Messrs. English Textilose Co., Ltd. ; factory, Warwick Road, for Messrs. J. Crampton & Co. ; pump and tank house, Fraser Road, for Messrs. Sterling Varnish Co. ; addition to shop, 896, Chester Road, for Mr. R. Rowland.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	ABERDARE	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	BANBURY	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5	1 0¾
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A	Cumberland	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	HALIFAX	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_2	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	JARROW	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	LANCASTER	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W. Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	PAISLEY	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W Counties	1 4	1 0
A_1	TAMWORTH	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1 1¼
A	Tyne District	N. E. Coast	1 5½	1 1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	YARMOUTH	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	,,		7	6
Building Sand	,,		7	9
Washed Sand	,,		8	9
2" Broken Brick	,,		8	3
¾" ,, ,,	,,		11	6
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	d.	6" s.	d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	9	2	6
,, Wirecuts	,,	8	2	6
,, Brindles	,,	7	6	6
,, Bullnose	,,	9	14	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	8	8	0
Luton Facings	,,	8	0	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmoriand green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	26	0	0
,, green	,, ,,	27	15	0
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

				s.	d.
Good carcassing timber		F.C.		2	2
Birch		as 1" F.S.			9
Deal, Joiner's		,, ,,			5
,, ,, 2nds		,, ,,			4
Mahogany, Honduras		,, ,,		1	3
,, African		,, ,,		1	1
,, Cuban		,, ,,		2	6
Oak, plain American		,, ,,		1	0
,, Figured ,,		,, ,,		1	3
,, Plain Japanese		,, ,,		1	2
,, Figured ,,		,, ,,		1	5
,, Austrian wainscot		,, ,,		1	6
,, English		,, ,,		1	11
Pine, Yellow		,, ,,		1	0
,, Oregon		,, ,,			4
,, British Columbian		,, ,,			4
Teak, Moulmein		,, ,,		1	3
,, Burma		,, ,,		1	2
Walnut, American		,, ,,		2	3
,, French		,, ,,		2	3
Whitewood, American		,, ,,		1	1
Deal floorings,	¾"	Sq.		19	0
,,	⅞"	,,	1	1	6
,,	1"	,,	1	3	6
,,	1⅛"	,,	1	7	6
,,	1¼"	,,	1	12	0
Deal matchings	½"	,,		14	0
,,	⅝"	,,		15	6
,,	1"	,,	1	4	0
Rough boarding	¾"	,,		16	0
,,	1"	,,		18	0
,,	1½"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1½"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61¼	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

			s.	d.
Rolled steel joists cut to length		cwt.	10	9
Mild steel reinforcing rods,	⅜"	,,	8	6
,, ,,	½"	,,	8	3
,, ,,	⅝"	,,	8	0
,, ,,	¾"	,,	7	6
,, ,,	⅞"	,,	7	6
,, ,,	1"	,,	7	6
,, ,,	1¼"	,,	7	6
,, ,,	1½"	,,	7	6

		3" s.	d.	4" s.	d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	,,	5	0	5	6
Boots	,,	3	3	4	5
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	2	0
,, drawn pipes	,,		19	0
,, soil pipe	,,	1	6	0
,, scrap	,,		14	6
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			10½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3"		4"		6"	
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2½
,, ,, 26 oz. ,, ,, ,,	,,					3½
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
⅛" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	1
Boiled oil	,,		2	3
Turpentine	,,		4	9
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

			£	s.	d.
Digging over surface n/e 12" deep and cart away		Y.S.		2	9
,, to reduce levels n/e 5' 0" deep and cart away		Y.C.		8	6
,, to form basement n/e 5' 0" deep and cart away		,,		9	0
,, ,, 10' 0" deep and cart away		,,		9	6
,, ,, 15' 0" deep and cart away		,,		10	0
If in stiff clay	add	,,		2	6
If in underpinning	,,	,,		4	0
Digging, return, fill and ram	,,	,,		4	0
Planking and strutting to sides of excavation		F.S.		1	0
,, ,, to pier holes		,,			5
,, ,, to trenches		,,			5
,, ,, extra, only if left in		,,			3
Hardcore, filled in and rammed		Y.C.		10	0
Portland cement concrete in foundations (6-1)		,,	1	6	0
,, ,, ,, (4-2-1)		,,	1	12	6
,, ,, ,, underpinning		,,	1	16	0
Finishing surface of concrete, spade face		Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
,, junctions		3	9	4	6
Gullies and gratings	,,	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
,, ,, in cement	,,	29	15	0
,, Stocks in cement	,,	35	15	0
,, Blues in cement	,,	52	0	0
Extra only for circular on plan	,,	2	0	0
,, backing to masonry	,,	1	10	0
,, raising on old walls	,,	2	0	0
,, underpinning	,,	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	,,			5½
,, ,, ,, red brick facings and pointing	,,			11
,, ,, ,, blue brick facings and pointing	,,		1	4
,, ,, ,, glazed brick facings and pointing	,,		3	6
Tuck pointing	,,			7
Weather pointing in cement	,,			3½
Slate dampcourse	,,			10
Vertical dampcourse	,,		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	,,	6	9
¾" paving or flat	,,	4	0
1" paving or flat	,,	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	,,		2
Rounded angle	,,		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	,,		13	6
Artificial stone and do.	,,		13	0
York stone templates, fixed complete	,,		10	6
,, thresholds	,,		13	6
,, sills	,,	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	,,	3	7	0
Do., 24" × 12"	,,	3	17	0
Westmorland slating, laid with diminished courses	,,	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	,,	3	0	0
Do., all as last, but of machine-made tiles.	,,	2	16	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
,, to stanchions	,,			8
,, to staircases	,,		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	,,		4	6
,, ,, roofs	,,		6	6
,, ,, trusses	,,		7	6
,, ,, partitions	,,		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" ,, ,, ,, ,,	,,	1	17	6
1¼" ,, ,, ,, ,,	,,	2	3	0
¾" × 2" fir battening for Countess slating	,,		9	6
Do. for 4" gauge tiling	,,		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
,, ,, ,, 2 ,,	,,		2	9
,, ,, ,, 3 ,,	,,		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1½" ,, ,, ,, ,, ,,	,,		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	,,	2	12	6
1½" do.	,,	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1½" do.	,,		1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" ,, ,,	,,	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	3	9
2" ,, ,, ,,	,,	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" ,, ,, ,,	,,	2	8
1½" ,, but moulded both sides	,,	2	4
2" ,, ,, ,,	,,	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" ,, ,,	,,	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	2	6
1½" deal moulded wall strings	,,	2	1
1½" ,, outer strings	,,	2	4
Ends of treads and risers housed to string	Each	1	9
" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" ,, ,,	,,	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	,,	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	,,		19	6
Do. stanchions with riveted caps and bases and do.	,,		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	,,		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	16	6
Do. in flashings		1	19	0
Do. in covering to turrets, etc.	,,	2	6	0
Do. in soakers	,,	1	12	0
Labour to welted edge	F.R.			3½
Open copper nailing	,,			3½
Close ,, ,,	,,			4½

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	,,	6½	8	9	11	1 3	—
Boiler screws and unions	,,	3 3	3 9	5 0	8 0	—	—
Lead traps	,,	—	—	—	6 3	8 9	—
Screw down bib valves	,,	6 9	9 6	11 0	—	—	—
Do. stop cocks	,,	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	,,	1	5
Do. outlets	,,	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	,,	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	,,		3	6
Lathing with sawn laths to ceilings	,,		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	,,		1	9
Do. vertical	,,		2	3
Rough render on walls	,,		1	4
Render, float and set in lime and hair	,,		2	0
Render and set in Sirapite	,,		2	2
Render, backing in cement and sand, and set in Keene's cement	,,		3	1
Extra, only if on lathing	,,			4
Keene's cement, angle and arris	F.R			6
Arris	,,			2
Rounded angle, small	,,			3
Plain cornices in plaster, including dubbing out, per 1" girth	,,			1½
1" granolithic pavings	Y.S.		3	6
1½" ,,	,,		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	,,		17	6
9" × 3" ,, ,, ,, ,,	,,	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	,,		8½
Arctic glass and glazing with putty	,,	1	1
Cathedral glass and do.	,,	1	2
Glazing only, British polished plate	,,		7
Extra, only if in beads	,,		2
Washleather	F.R.		4

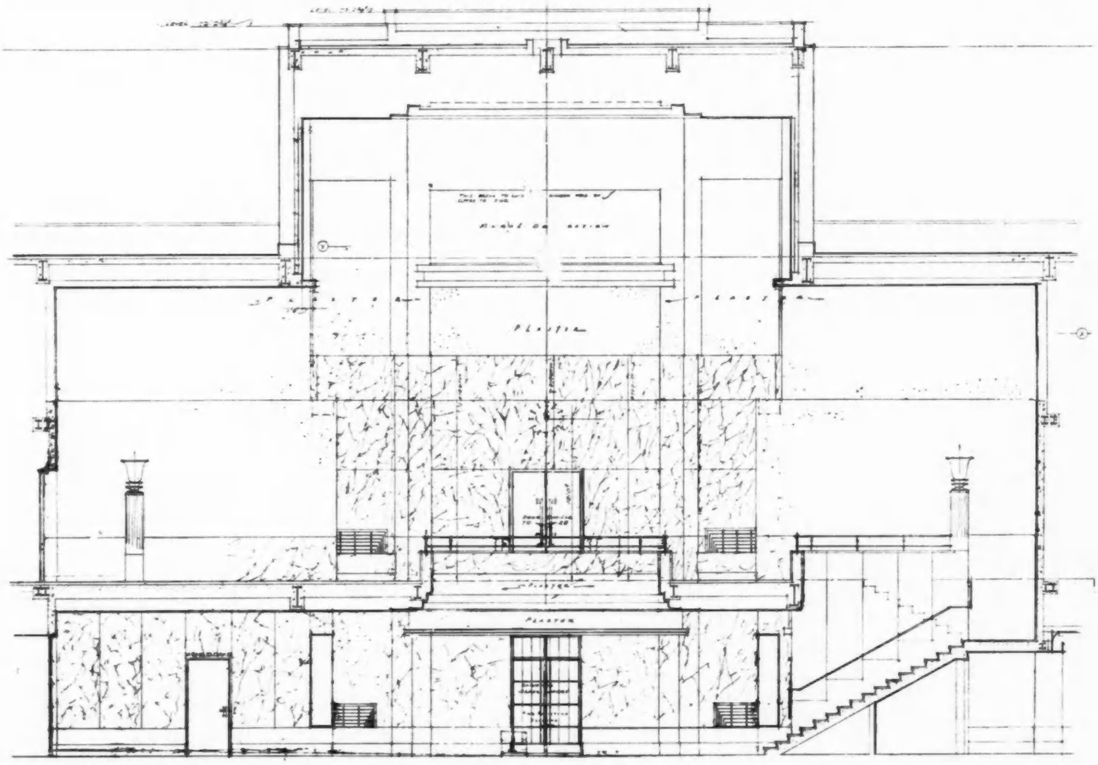
PAINTER

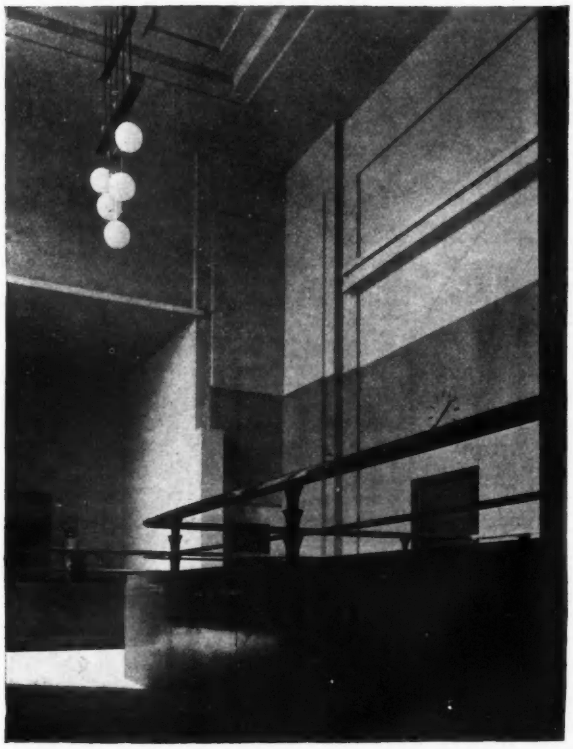
		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	,,		9
Do. with washable distemper	,,	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3	3
Do. on woodwork	,,	3	6
Do. on steelwork	,,	3	0
Do. and brush grain and twice varnish	,,	5	6
Stain and twice varnish woodwork	,,	1	11
Stain and wax-polish woodwork	,,	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper from	,,	2	9

Supplement to THE ARCHITECTS' JOURNAL for August 3, 1933

THE ROYAL MASONIC HOSPITAL

DESIGNED BY SIR JOHN BURNET, TAIT AND LORNE

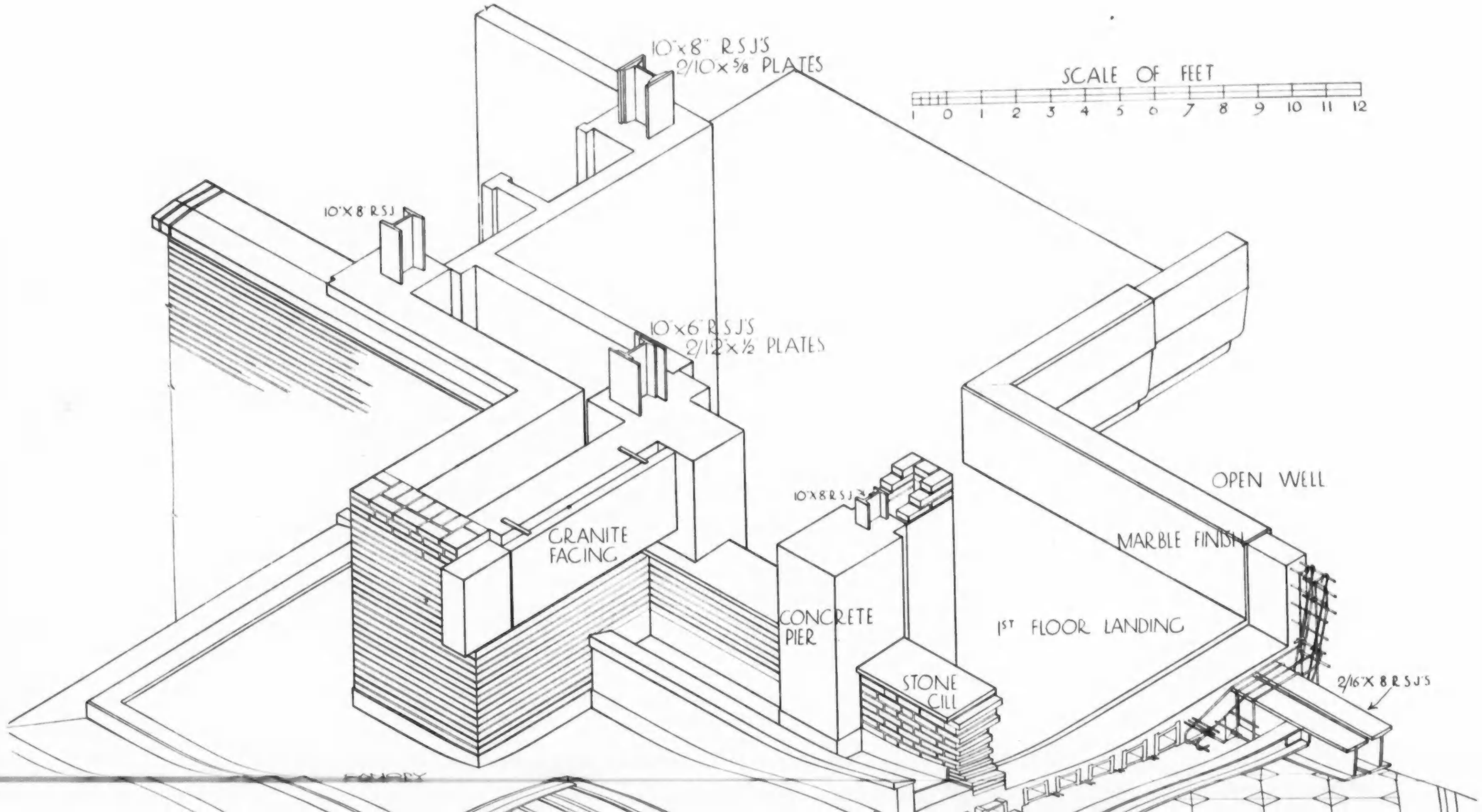


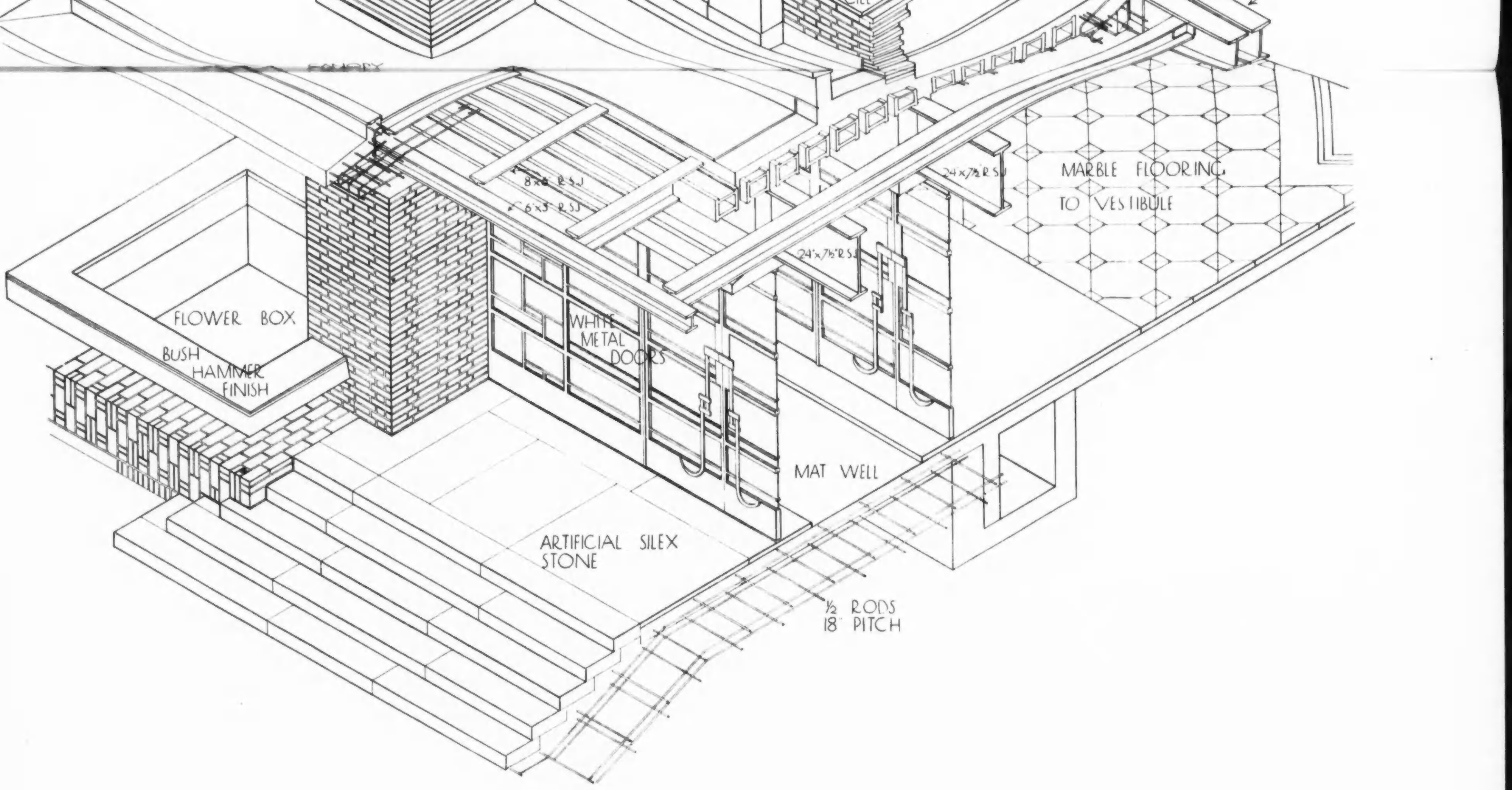


THIS week's supplement shows details of the main entrance to the administration block of the Royal Masonic Hospital, Ravenscourt Park, London. W., which is further illustrated in the body of this issue.

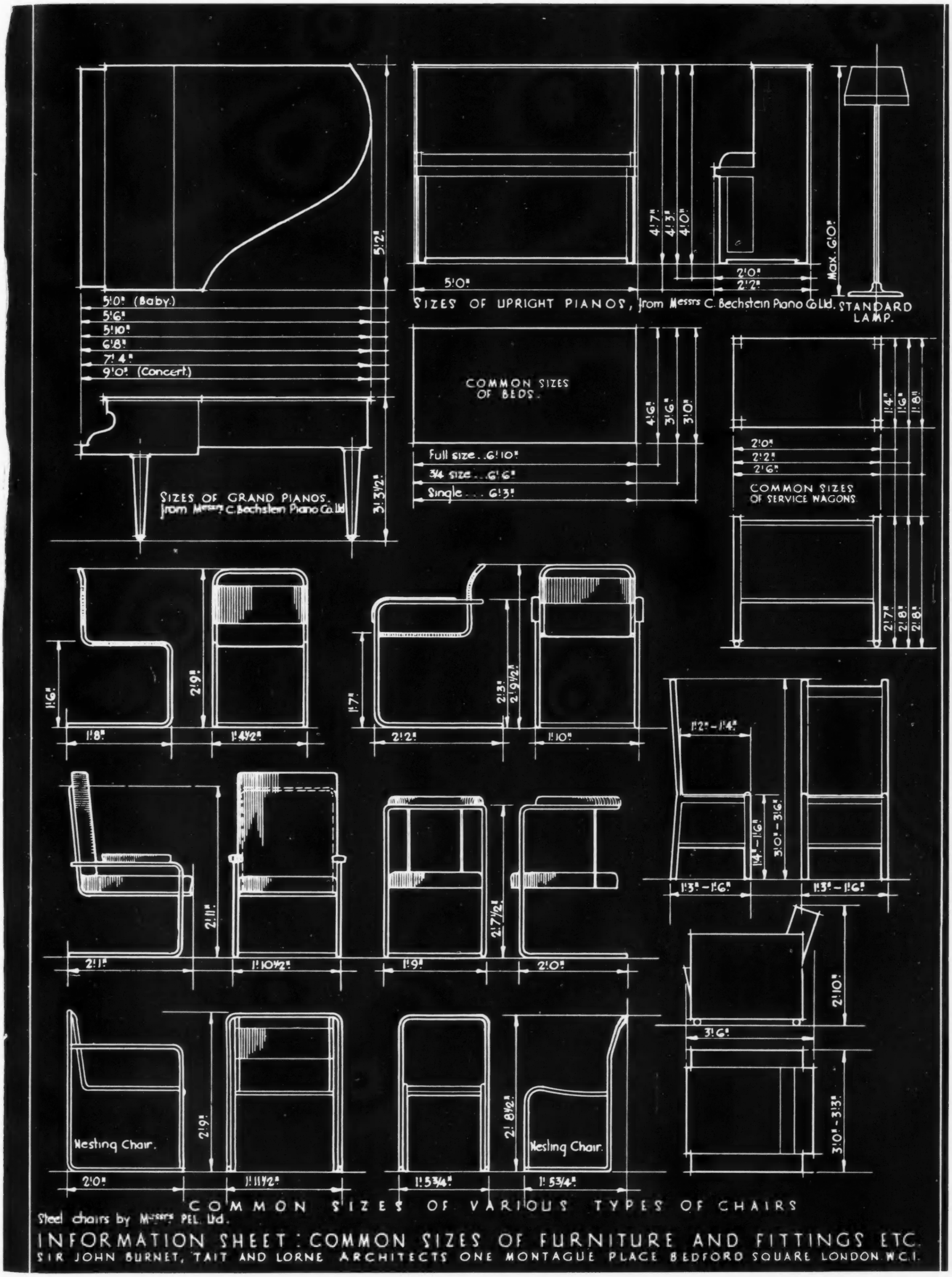
The isometric drawing overleaf shows the steps to the entrance, the canopy over, part of the wall and the first floor landing with open well construction.

The outside steps are of artificial stone, supported on a reinforced-concrete slab. The landing is paved with the same material. On each entrance side are flower boxes, 9 ft. square, constructed in concrete. The canopy is of steel-frame construction filled in with hollow tiles and concrete with an asphalt covering. Along the back of the canopy is a dwarf wall about 2 ft. 6 ins. high enclosing more space for flowers. The doors are of white metal with leaded lights. The floor of the hall, the face of the open well and the first floor landing are finished in marble.


10"x8" RSJ'S
2/10"x⅝" PLATES
SCALE OF FEET
1 0 1 2 3 4 5 6 7 8 9 10 11 12
10"X8" RSJ
10"x6" RSJ'S
2/12"x½" PLATES
OPEN WELL
MARBLE FINISH
GRANITE FACING
10"X8" RSJ
CONCRETE PIER
1ST FLOOR LANDING
STONE CILL
2/16"X8" RSJ'S


MARBLE FLOORING
TO VESTIBULE
24"x7½" R S J
8x6 R S J
6x3 R S J
24"x7½" R S J
FLOWER BOX
BUSH HAMMER FINISH
WHITE METAL DOORS
MAT WELL
ARTIFICIAL SILEX STONE
½ RODS
18" PITCH

Isometric drawing of the entrance to the Administration Block


5'0" (Baby.)
5'6"
5'10"
6'8"
7' 4"
9'0" (Concert.)
5'2"
3' 3½"
SIZES OF GRAND PIANOS. from Messrs C. Bechstein Piano Co. Ltd
5'0"
4'7"
4'3"
4'0"
2'0"
2'2"
SIZES OF UPRIGHT PIANOS, from Messrs C. Bechstein Piano Co. Ltd.
Max. 6'0"
STANDARD LAMP.
COMMON SIZES OF BEDS.
4'6"
3'6"
3'0"
Full size . . 6'10"
¾ size . . . 6'6"
Single . . . 6'3"
1'4"
1'6"
1'8"
2'0"
2'2"
2'6"
COMMON SIZES OF SERVICE WAGONS
2'7"
2'8"
2'8"
1'6"
1'8"
2'9"
1'4½"
1'7"
2'2"
2'3"
2'9½"
1'10"
1'2" – 1'4"
1'4" – 1'6"
3'0" – 3'6"
1'3" – 1'6"
1'3" – 1'6"
2'1"
2'11"
1'10½"
1'9"
2'7½"
2'0"
2'10"
3'6"
3'0" – 3'3"
Nesting Chair.
2'0"
2'9"
1'11½"
1'5¾"
2' 8½"
Nesting Chair.
1' 5¾"
COMMON SIZES OF VARIOUS TYPES OF CHAIRS
Steel chairs by Messrs PEL Ltd.

INFORMATION SHEET: COMMON SIZES OF FURNITURE AND FITTINGS ETC.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

• 28 •

FURNITURE AND FITTINGS

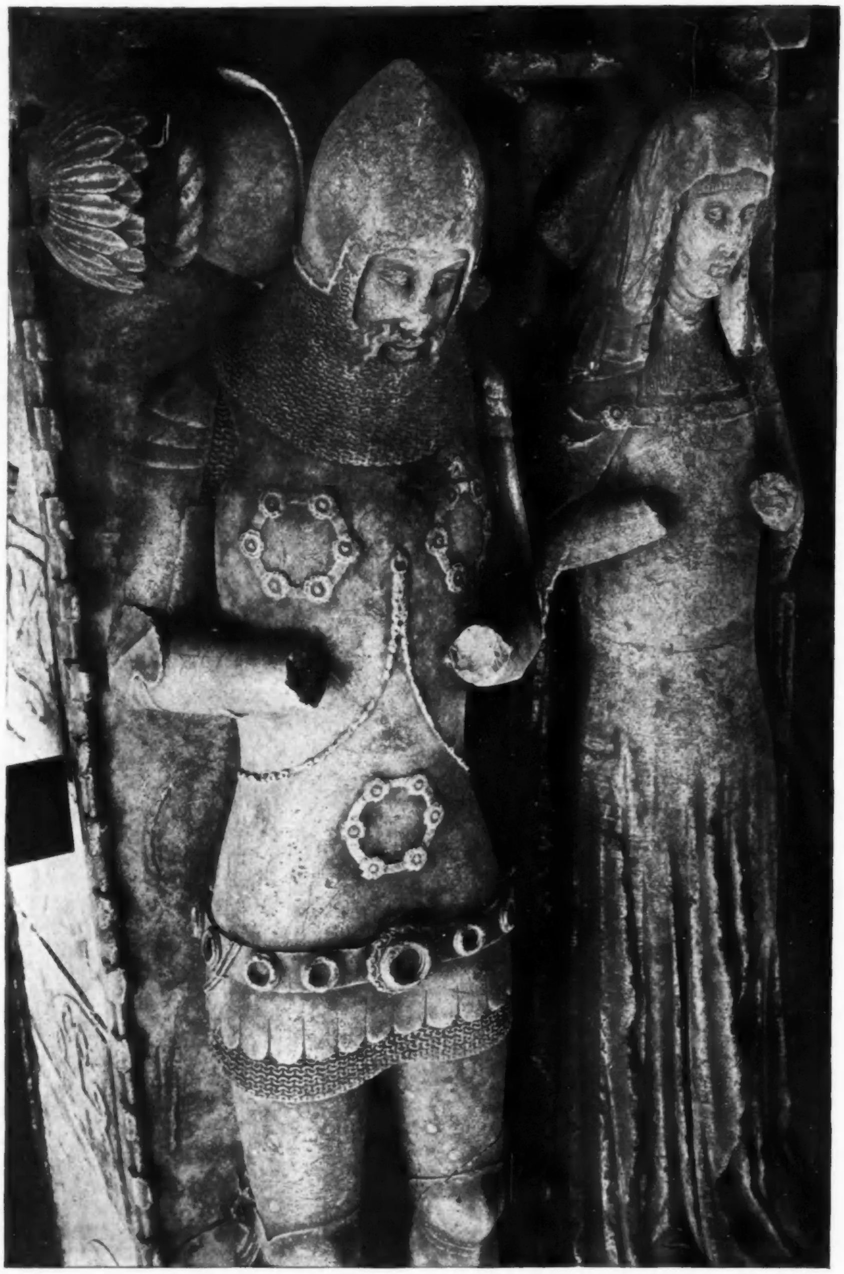
THIS week's Information Sheet shows sizes of domestic furniture. It will be followed by two sheets showing the lay-out of wardrobes, etc.

The following is a full list of the subjects previously issued :—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units : 1.
13. Apr. 12—Lavatory Units : 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes.
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs
22. June 15—Concrete Stairs : 1.
23. June 29—Concrete Stairs : 2.
24. July 6—Pressed Steel Stairs : 1.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs : 2.
27. July 27—Office Furniture.

LORD MOYNE

THE Right Hon. the Lord Moyne, D.S.O., Chairman of the Departmental Committee on Housing, which was set up by the Minister of Health in March of this year, and which has just presented its report. The Committee's terms of reference and extracts from the Report are published on pages 169-172 of this issue.



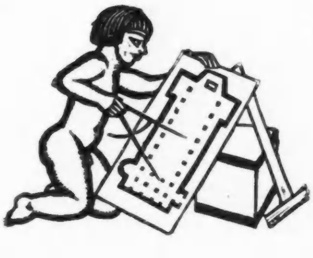
A MEDIÆVAL EFFIGY

There was a time when English sculpture meant, quite simply, English craftsmen using the materials that came to hand in the most suitable way for the representation of the part and the embellishment of the whole. In these days of international eclecticism and of materials that imitate each other, there is a useful moral in the mediæval sculptor's attitude to materials. He did not expect a new material to enable him to produce the same things, only with less trouble. He welcomed it as an invitation to explore in new directions.

The effigies of the alabaster period of English ecclesiastical sculpture, of which the above is an example, carried on the traditions of the earlier work in wood and freestone but took advantage of the more exact finish that the new material allowed to represent the richness that the period required. They were largely executed in a local school of tomb-makers that sprang up near the quarries from which the alabaster was taken.

The effigy shown is of a member of the Hilton family, from Swine Priory, Yorkshire. The date is c. 1370.

From ENGLISH CHURCH MONUMENTS. *See pages* 182-184 *of this issue.*



M.INST.R.A.

THE INSTITUTE OF REGISTERED ARCHITECTS: QUESTIONS FOR THE REGISTRATION COUNCIL

UP to the time of going to press, there has been no news of further developments in what has now become a dispute over the establishment of the new Institute of Registered Architects.

The R.I.B.A., in a letter, circularized to its members and published in the leading article last week, stated that the new Institute was superfluous, and Members of the R.I.B.A. and the Allied Societies would be well advised to disregard it altogether.

Major Harry Barnes, chairman of the Architects' Registration Council of the United Kingdom, in a letter to the Press, also published in last week's leading article, said :

> I know of nothing in the situation which requires the setting up of a new body to protect the interests of Registered Architects. In so far as such persons are members of existing professional Architectural Organizations, and they form a vast majority o those on the Register, they are amply protected by the presence of direct representatives of those Associations on the Architects' Registration Council.
>
> In so far as they are not members of existing professional organizations, and these form a relatively small minority of those on the Register, they are very ably represented at the present time, and in the same proportion as those Registered Architects who are members of existing professional organizations, by a gentleman appointed in the first place by the Secretary of State for Home Affairs as provided by the Act.
>
> I do not know, and nothing in the communication which has been addressed to me (by the new Institute) enlightens me, as to what measures for the protection of Registered Architects are not either being or likely to be promoted by the Architects' Registration Council.

It seems reasonable to assume from the letter from Major Barnes that the main issue is not between the Institute of Registered Architects and the R.I.B.A., but between the new Institute and the Registration Council, although it is hoped that the R.I.B.A. will issue a detailed explanation of its circular, and make its own position clear.

What measures can be promoted by the Registration Council for the protection of the Registered Architect? The functions of the Council are defined in Clause 3 of the Act :

> It shall be the duty of the Council within six months from the commencement of this Act to set up and thereafter maintain a register to be called "the Register of Registered Architects" and to cause to be entered therein the name and address of every person entitled to be registered . . . .
>
> Again Clause 13 sets forth that, subject to the provisions of the Act, regulations made by the Council shall or may, as the case may be, prescribe anything which is by this Act required or authorized to be prescribed, and may further make provision—
>
> (*a*) prescribing the fee (hereafter in this section referred to as a "retention fee") to be paid in respect of the retention of any name in the Register during any calendar year subsequent to that in which the name was entered in the Register, and the fees to be paid by candidates for any examination held under this Act ;
>
> (*b*) prescribing the information to be furnished to the Admission Committee or the Council in connection with any application for registration under this Act ;
>
> (*c*) providing (subject to such restrictions or conditions as may be prescribed) for the delegation to committees of any of the functions of the Council other than functions under section six or section seven of this Act ;
>
> (*d*) regulating the meetings and procedure (including quorum) of the Council, the Board and any committee appointed under this Act ;
>
> (*e*) for the filling of casual vacancies in the Council, the Board, and any such committee as aforesaid ;
>
> (*f*) generally for carrying out or facilitating the purposes of this Act . . . .
>
> No regulations made under this Act shall be of any force or validity unless and until they have been approved by the Privy Council . . . .

Even after the most careful examination of all the clauses in the Act, it is not possible to say exactly what the Registration Council may or may not do until its functions are more clearly defined. A case in point is Clause *f*, quoted above. Does this clause enable the Registration Council to promote measures embodying the most important, if not all, of the primary objects of the new Institute ?

Other questions readily come to mind.

Does the constitution of the Registration Council allow it to establish a code of professional practice for the guidance of the Registered Architect, who is not a member of a professional society ? If so, should a code and a scale of fees, similar to those of the R.I.B.A., be drawn up immediately and made a condition of Registration ?

Would the Registration Council have power to remove the name of a person from the Register for failing to work to such a code of professional practice ? According to Clause 7 of the Act, the name of a person can only be removed from the Register for criminal offence or after he has been guilty of conduct disgraceful to him in his capacity as an architect.

Has the Registration Council defined what an architect is, or, rather, what a Registered Architect should be ? This is a question which vitally affects the final decision of the Council as to whom to accept and whom not to accept for Registration. Clause 6 is particularly vague, and states that a person shall be entitled to Registration if the Council is satisfied on a report of the Admission Committee

> (*a*) that he is an architect member of the Royal Academy or of the Royal Scottish Academy : or
>
> (*b*) that his application for Registration was made within two years from the commencement of this Act and that at the commencement of this Act he was, or had been practising as an architect in the United Kingdom ; or
>
> (*c*) that he has passed any examination in architecture which is for the time being recognized by the Council, or
>
> (*d*) that he possesses the prescribed qualifications.

Finally, how many of the architects accepted for Registration are not members of the R.I.B.A. or of a similar body ?

If the Registration Council will give us definite answers to these questions, then the main issue raised by the establishment of the new Institute, will be better understood.

The Architects' Journal
9 Queen Anne's Gate
Westminster, S.W.1
Telephone: Victoria
6 9 3 6
Telegrams:
Buildable
Parl.
London

NOTES & TOPICS

THE MOYNE REPORT

LORD Moyne has hurried off to enjoy some tunny fishing, and has left behind the report of the Departmental Committee on Housing, of which he was chairman. It is a curious jumble of arguments, and I think that Sir Raymond Unwin is treated in rather too cavalier a fashion. Elsewhere, I understand, will be found some of the reasons why the Moyne Committee were unable to recommend the adoption of any of the proposals which Sir Raymond put forward for a National Housing Corporation.

*

FLOATING A NEW IDEA

The late President of the R.I.B.A. was so enthusiastic and sincere about his project that many, including *The Times*, have expressed regret at the Committee's rejection of it. At the same time it must be admitted that the original meeting to float the project fell very flat, as I stated here at the time, possibly because none of the speakers had a very clear idea as to what the Corporation suggested would really mean. Sir Raymond, as an old Civil Servant, must realize that a clear-cut, thoroughly thought-out policy is most likely to be accepted by politicians.

*

THE P.U.S.

The Moyne Committee have great hopes of the work that may be done by Public Utility Societies. They appear to have overlooked the fact that out of 302 Public Utility Societies registered since 1919, 89 are now defunct. In 14 years all these societies provided only 20,000 dwellings; less than the L.C.C. have erected at Becontree alone. Of the 20,000 P.U.S. dwellings, 12,000 were erected by the commercial organization inspired by the late Sir Tudor Walters. All the present signs suggest that local authorities, through their responsible organizations, will advise the Government in the autumn that they do not look with favour upon additional subsidies being paid to voluntary societies with such a poor record. They will ask to be allowed to proceed resolutely with the slum clearances and improvement schemes now in hand under the 1930 Act.

*

It is slum clearance indeed and reorganization on the largest scale that is the pressing question; more so than the less sweeping ones of maintenance and renovation. But it is with the last, unfortunately, that the Committee, by their terms of reference, had chiefly to concern themselves.

*

WOMEN MANAGERS

However, all with intimate knowledge of housing will cordially welcome the view of the Committee that they "are as much impressed by the need of improved management as for improved standard of repairs." They consider above all that tenants should be supervised by properly trained House Property Managers, particularly by women trained on the Octavia Hill system.

*

I have met many of the women managers who are now employed either by municipalities or by such bodies as the Ecclesiastical Commissioners, or by private individuals, and have the greatest admiration for their tact, enthusiasm and endurance of disagreeable conditions. But candidly I think that on certain classes of property an experienced married man is just as good as a young woman with an Oxford degree; and if, as a result of this Report, the demand for women managers increases, it may well be necessary to select working-class women and give them at least a five years' training, as is the practice in Holland. The Moyne Committee have, however, done most useful work in bringing to the public notice that efficient management is a key to the solution of the slum problem.

*

A HINT FOR ARCHITECTS

Architects will be particularly interested in Part IV of the Report, which deals with types of new houses required. The Committee advise that a larger proportion of a small type of dwelling should be provided in the future for single persons and for married couples without children. "It should be possible, by economical planning, to devise a simpler and smaller type of accommodation on which a substantial saving in cost, and so in rents, could be secured." Attention is also drawn to the need of hostels, such as that opened last may in Glasgow, with single rooms for unmarried men or women. Here is a field for exploration by the architect with initiative.

*

LONDON'S STUCCO-FACED TERRACES

Few people realize the vast extent of the nineteenth-century classical terrace-house development in London, or how fine a work it constitutes. From Shepherd's Bush to Camden Town are mile upon mile of stucco-faced terraces in streets, squares, gardens and crescents. Occasionally streets are dull and cheerless, but how much oftener are they not bowered in trees? And what extraordinary variety within the established convention! And what a finished production the whole thing is!

*

But—what is going to be done about it?

Sir John Burnet, Thomas S. Tait and Francis Lorne, architects for the Royal Masonic Hospital, illustrated in this issue.

We grow near the end of leases. Property decays; its uses change. Some day it must be decided, this question of re-development. At the moment we are being opportunists, and the blocks of flats that go up here and there, while they shatter the pleasant homogeneity, hardly offer a model for large-scale re-development.

*

Here, if ever there was one, is a subject for town-planning research, an active problem already on the move towards some sort of solution. But what on earth can town planning do for this impassé? Where does control lie?

*

THE GENIUS FOR COMPROMISE

The managing director of a once prosperous furnishing business was explaining his plans to me this week for the recapture of prosperity. "The day of good reproduction stuff's gone by," he observed regretfully, "so I'm cashing in on this modernism."

*

He didn't propose giving the public modernism neat, so to speak. He showed me some examples of what I suppose ignorant foreigners would call "the English genius for compromise."

*

After seeing it I felt that Queen Anne had died in vain.

*

He had evolved one or two "original" ideas—notably the employment of austere shapes for wardrobes and chests, untroubled by mouldings or ornament, but he gave to those modern shapes an "antique finish."

*

An "antique finish" is inspired partly by dirt and partly by prolonged and earnest contemplation of treacle. By what process of perverted reasoning he arrived at the idea that modern shapes would be improved by the imitation of a time-toned exterior I am unable to guess. He seemed to be quite a normal man of business.

SEASIDE TOWNS IN NORTH WALES

Although Wales has always taken pride in being progressive, it is said that as regards town-planning it is the most backward region in the country. The growth of certain seaside towns in North Wales, such as Llandudno, Colwyn Bay and Rhyl, has been unregulated, except to a limited extent possible under by-laws. The views of estate owners in laying out new parts of seaside towns do not always harmonize with the public interest.

*

I was recently told by Mr. Edgar L. Chappell, who is the "live wire" in planning in Cardiff and district, the discouraging fact that, with the sole exception of Conway and Aberystwyth, the glorious coast-line of Wales from Flint to Swansea is outside the scope of town-planning schemes, whilst the agricultural and industrial areas of most of the counties, except Wrexham in the North, and a limited number of districts in Glamorgan and Monmouthshire, fare no better. Where there is an active Town-Planning Committee, however, wise action has been taken.

*

A week or so ago I motored along the road constructed to connect Barry and Cardiff, and found that it has been designed to by-pass Wenvoe Village, which is one of the most picturesque and unspoilt villages in this country.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, August 10

COTTAGES IN THE STRAND. Exhibition, until the end of the month, of the Building Centre prize-winning cottages on the Aldwych site, Strand, W.C.

R.S.A. INDUSTRIAL DESIGNS COMPETITION. At the Imperial Institute, South Kensington, S.W. Exhibition of the designs submitted in the tenth annual open competition. Until August 31. 10 a.m. to 5 p.m. (Sundays: 2.30 to 6 p.m.) 10 *a.m.*

Saturday, August 12

Sunrise 5.40 a.m. Sunset 8.29 p.m.

Wednesday, August 16

LONDON SOCIETY. Visit to Lyon House, Isleworth. 2.30 *p.m.*

NEWS

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POINTS FROM THIS ISSUE

Presenting the speculative builder with a permanent retort to the architect's plea to be allowed control over suburban development *168*

It is the very uncertainty of the income from small house property which is the reason for the comparatively high rate of interest on which the private investor bases rents *169*

The English may not be artists, but they have produced works of art *184*

The public does not accept as sculpture anything in a recumbent position .. *184*

The remedy for flat roofs that have expanded in hot weather *185*

●

THE CIAM AND THE MARS GROUP

The fourth Congress of the International Congresses for Modern Architecture ("C.I.A.M.") is now being held on board the s.s. "Patras II," cruising, until August 17, in the Mediterranean and visiting Athens and the Greek Islands.

England is represented by a delegation from the MARS Group. This is the first time that an official delegation has been sent from this country. The twenty nationally organized groups of architects, engineers and town planners constituting the International Congresses, are contributing maps and an analysis of existing conditions in towns and cities in their respective countries, under the general heading "The Function of the Town."

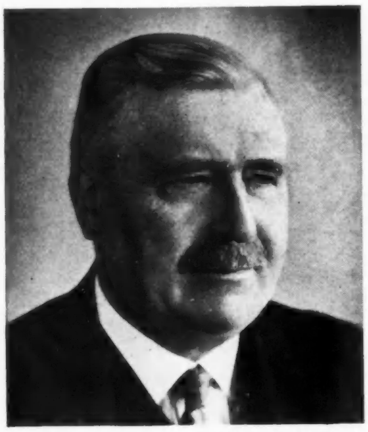
Since the announcement three months ago of the formation of MARS, the British Group has been concentrating on the preparation of a map, which, together with data on existing conditions in London, they are presenting at the Congress. This is a circulation analysis map, showing all traffic ways, arterial and secondary roads, bus and tram routes, railways and underground railways, and river transport, together with the nature and density of traffic which occurs on them. It is presented to the same scale and with the symbols internationally adopted by CIAM and covers over a hundred square feet.

In addition, descriptive reports have been prepared by MARS on geological data, prevailing winds, and climate; historical development of roads from Roman times; and tendencies of development (i.e., centralization, decentralization, longitudinal development and scattering); private property, economic and other functions, production, and the general disposition of principal elements of the town in relation to the whole or its parts (i.e., residential in relation to industrial, to centre, to free spaces and to circulation).

Official and semi-official statistics now available, indicate that the decline in the trade of the building and public works industry owing to the reduction in the demand of public authorities for constructional works, consequent upon the "economy" campaign, is in the neighbourhood of £75,000,000. The widespread effects of such a reduction on all industries connected with building is immediately obvious.

Everyone connected with the industry should support the work of the Special Committee for Public Relations of the Building Industries National Council. Since that work commenced the turnover of the building industries has increased, but the industry cannot be said to be in a healthy condition until the postponed schemes are undertaken.

A subscription of £25, a second instalment of £100 to the General Fund of the Special Committee for Public Relations, has been received from the Thames Grit and Aggregates, Ltd. (Ham River Grit Co., Ltd.). The total subscriptions to the fund now amount to £2,994 17s. 10d. Cheques should be made payable to the Special Committee for Public Relations, and should be addressed to the Hon. Treasurer, at 5 Duke Street, Adelphi, W.C.2.



S. Bylander, who acted as consulting engineer for the Royal Masonic Hospital. It is interesting to note that Mr. Bylander was responsible for the first use of a riveted steel frame in this country (in the Ritz Hotel, London, for which he was consulting engineer), and for the first use of welded steelwork (in the sun balconies of the Royal Masonic Hospital, illustrated in this week's supplement).

This material will be used again, immediately after the Congress, in connection with the MARS Analysis of Slum Clearance, the programme for which will be announced in September. An announcement regarding methods of participation in MARS activities will be made at the same time.

The Reports of the Fourth Congress of the CIAM will be published in book form, in English, French and German, in about six months' time.

THE MOYNE REPORT ON HOUSING

The Minister of Health has made the following statement in connection with the Moyne Report on Housing.

"The Report is a document of the greatest interest and importance. It deserves and is receiving the close attention of the Government, and an announcement will be made in due course as to the decisions of the Government upon its recommendations.

"In the meanwhile it is clear that there is nothing in the recommendations of the Committee that at all affects or modifies the request contained in my circular letter (Circular 1331) of April 6, 1933, to the local authorities of the country in which I requested them to submit, before the end of September, programmes for dealing with the evil of the slums. The Moyne Report, indeed, carefully and expressly avoids making any recommendation or raising any question that would even indirectly have the effect of hindering or postponing immediate framing of those programmes.

"The request for the programmes stands unaffected, and it is expected that they will be submitted by the date mentioned."

NEW CINEMA AT HOVE

The Granada Cinema, Hove, has just been completed from the designs of Mr. H. L. Hemsley, L.R.I.B.A.

BIRMINGHAM HOSPITALS CENTRE

The Executive Board of the Birmingham Hospitals Centre, at a meeting last week, accepted a tender of £636,335, submitted by Messrs. Wilson, Lovatt and Sons, of Wolverhampton, for the erection of the first instalment of the new hospitals centre. The architects for the scheme, which was the subject of an open competitoin held some three years ago, are Messrs. Lanchester and Lodge.

WATERLOO BRIDGE

Tenders are shortly to be invited by the London County Council for the work of reconditioning Waterloo Bridge. It is expected that the work will take about four years and the estimated cost is £685,000.

SEASIDE ARCHITECTURE

It has been decided to reconstruct Morecambe Central Pier, which was destroyed by fire on Monday of last week. The dance hall is to be constructed of such materials as will make it as fireproof as possible.

Professor Lionel B. Budden, F.R.I.B.A., in an article entitled "Seaside Piers" in *The Manchester Guardian* for August 4, said: "The position in relation to the problem of pier-building, like that in relation to many other architectural problems, has during the last quarter of a century been radically altered as a result of experiments in new materials and in new methods of construction and in the development of a technique of design which is primarily concerned with the practical facts of the programme. Whilst in the nineteenth century the requisite lightness of structure in pier buildings could only be economically obtained by using wood, today other means are at our disposal. Light metal sections for the structural framework, thin channelled steel sheeting with pumice concrete and asphalt for roof slabs, and stucco on expanded metal or hollow blocks for wall in-fillings constitute resources which make possible fireproof buildings, sufficiently strong to withstand the exigencies of even the most exposed site without imposing too great a load upon the substructure. Again, today fireproof paints are available, as well as non-inflammable hangings, and light metal furniture with fireproof upholstery can also be used by the pier architect."

GREATER LONDON REGIONAL PLANNING COMMITTEE

It is understood that Major Hardy-Syms, who has been appointed Technical Adviser to the Greater London Regional Planning Committee, will take up his new duties towards the end of September.

THE ROYAL SOCIETY OF BRITISH SCULPTORS

The Royal Society of British Sculptors have awarded their medal "For the best work of the year by a British sculptor in any way exhibited to the public in London" to Mr. Sargeant Jagger, A.R.A., F.R.S.B.S., M.C., for his stone groups of sculpture at Imperial Chemical House, Millbank, S.W.

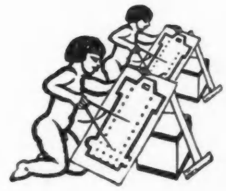
R. I. B. A.

COMPETITION BARRED

The following notice has been issued by the R.I.B.A. regarding the competition for a proposed bathing pool, Llandudno :—

"Members of the Royal Institute of British Architects and of its Allied Societies must not take part in the above competition, because the conditions are not in accordance with the published Regulations of the Royal Institute of Architectural Competitions."

COMPETITION



NEWS

This A.A. Competition

[BY OUR COMPETITION CORRESPONDENT]

SOME months ago the Building Centre held a competition for the design of a pair of workmen's cottages. Competitors were given plans of the usual type of cottage erected for such purposes and asked to improve on them. It was felt at the time that this was not the way to approach the problem—to start by accepting a housing unit that is admitted to be unsatisfactory and invite architects merely to improve on this already out-of-date model. The promoters, however, had so stressed the practical and financial side of the problem by requiring actual builders' tenders to accompany the drawings, that the competition was accepted by many for the sake of the contribution it would make to the economics of cottage building generally, and for the sake of the propaganda value the exhibition of cheap yet decently designed cottages would have, and the short-sighted housing policy on which the whole scheme was based was overlooked. The cottages were designed, selected, built, criticized and admired, and are soon to be demolished ; and the feasibility of erecting well-designed cottages that can be let at an economic rent has, it is hoped, been demonstrated.

Now the Architectural Association have followed the Building Centre example by inviting designs for suburban villas and by giving competitors type plans on which their own plans are to be based.

This competition, however, has not even the economic justification of the previous one, and seems to be following a deplorable precedent in trying to induce much-needed improvement in suburban design by accepting for a basis a principle that itself stands in the way of a satisfactory solution.

The Architectural Association are no doubt holding the competition with all the best intentions ; but, quite apart from the serious misconceptions thus implied of the right way of approaching the suburban problem, such a competition as this is equally dangerous for the part it assigns to the architect in the solution of this problem. It threatens to introduce into the mind of the speculative builder and the public an entirely false conception of the architect's function.

The builder, apparently, is still to be allowed to develop his estate by planting down a sequence of type houses on no co-ordinated plan, while the architect may or may not be called in to *improve the design* (the phrases in italics are quotations from the conditions of the competition) of *houses which are being put up.* The architect's function, in fact, becomes to put the architecture in and so make them into *architect-designed houses.*

The promoters, in presenting a number of bad plans and asking for improvements, cannot intend that the plans shall be "improved" beyond recognition, for in that case a schedule of accommodation would provide a much less confusing way of stating what is required ; and it can only be assumed that they are afraid of suggesting anything so drastic to the speculative builder as that he should tear up his inefficient plans and start again.

But if the architect will not give him a courageous lead in a matter like this, who will ?

The whole competition is based on a half-hearted approach to the subject, in detail as well as in general purpose, and a shirking of all the really serious problems.

That this is so can best be demonstrated by further quotations from the conditions :—

No lay-out plan is to be submitted, as this has already been prepared, and *definite sites have been allotted* on the estate on which selections of the winning designs are to be built.

The orientation, aspect and site-planning generally, therefore, are not to be taken into consideration by competitors. How, then, are the awards to be made ? Will the winning designs be those that happen best to fit a predetermined site about which the competitors are kept in the dark (in which case the competition merely becomes a lottery), or will they be selected just as "design for a house" entirely on paper (in which case the probability arises of the winning design, when erected, finding itself with its bay windows looking north and its larder south, and offering another target to those who already find it easy enough to vilify the architect). Alternatively, if the promoters, like those of the Building Centre competition, are merely following the usual practice of the speculative builder in requiring a plan that can be made to face in any direction without detriment to its efficiency, they are even more guilty of basing their conditions on a provedly unsatisfactory housing system and have even less right to call the resulting villas "architect-designed."

So much for the site. Now for the promoters' suggestions about character.

Rough-cast and half-timber work should be avoided. The A.A. is not old-fashioned.

The general effect should be one of brightness and simplicity. The A.A. moves with the times.

For this competition the flat-roofed treatment is not permissible. But it is careful not to move too fast.

Avoid waste of expense in plans and in elevation. That is quite natural. The promoters do not expect Mill Hill to rise to an expensive A.A. elevation on a simple suburban plan.

So much for the "architecture." Now for cost. *Avoid waste of expense. The necessity for strict economy must be kept in mind.* And yet *no estimate of cost* is required. Why not? The modern housing problem is largely dependent on economic factors, and the architect who ignores the financial side of building is not tackling the problem at all. Perhaps it would be unfair to assume that the A.A. have merely thrown in cost with the other fads, such as aspect, the possibilities of flat roofs and town-planning, that it regards as unworthy of its attention. Let us give them the benefit of the doubt and say that the promoters intend to make their own estimate of cost from each competitor's design in order to avoid the risk of over-optimistic competitors being credited with a scheme more economical than they deserve.

If this is the case a price limit should certainly have been set as a guide to the expenditure to be allowed for. Choice of materials in many cases depends, not on actual efficiency, but on the amount of the capital sum that may be expended to bring in a fixed return.

Finally, to quote one or two more general instructions from this document :—

A selection of the drawings will be exhibited at the Architectural Association or elsewhere. Why only a selection? It is a generally accepted rule in architectural competitions, and is only fair to the competitors, that all the designs should be publicly exhibited. By suppressing designs of merit the promoters can give the impression that none were sent in ; in fact, they can prove almost anything by judicious selection.

No queries will be answered regarding this competition. That is not surprising.

The A.A. in its pedagogic way still apparently regards a "design for a small house" as an isolated problem to be solved on paper without regard to any of the sociological, financial or even the town-planning questions involved, and it is from this aspect that the shortcomings of the competition are most apparent. If it were merely a badly and incompletely thought-out competition, it would only be the competitors who would suffer—and the reputation of the promoters ; but it is more than that.

The promoters are giving architectural endorsement to a definitely retrograde step in suburban planning. For years we have been complaining plaintively of the deplorable way our suburbs are developed, but without doing anything useful about it ; and now the architect, as represented by a responsible body (the Architectural Association) at last makes a move. What does he suggest? He is prepared, the A.A. announces, to quote once more from the conditions of this competition, to *recognize the builder's problem and endeavour to deal with it in an architectural way to produce houses which will be acceptable to the buying public and readily saleable.* And how? By encouraging the speculative builder still to develop his estates in piecemeal fashion, and to put up the same uneconomic houses with bright and simple improvements suggested by the architect.

It is most misleading to call a house "architect-designed" when an architect has drawn the plans and elevations with no opportunity of taking into account the orientation and topography of the site, the character of the neighbouring houses or the economic basis on which the estate is to be organized—in fact, when the house is bound to have most of the very failings for which speculative builders' houses are generally condemned ; yet the promoters of this competition proudly state that, *at least one house of each winning design will be built on the . . . estate,* and *the remaining houses will be designed by architects so that the whole scheme will be a demonstration of architect-designed houses.*

Can't we imagine them already? A selection of winning designs standing in a row on their estate at Mill Hill, each a little different (though all simple and bright) ; an inescapable example to the public of an architect-designed estate, and at the same time presenting the speculative builder with a permanent retort to the architect's plea to be allowed control over suburban development.

R.S.A. INDUSTRIAL DESIGNS COMPETITION

A selection of the designs submitted for the tenth annual open competition of industrial designs for prizes and scholarships offered by the Royal Society of Arts, city companies, manufacturers and other bodies, is now on exhibition in the Exhibition Pavilion at the Imperial Institute, South Kensington, S.W., between the hours of 10 a.m. to 5 p.m. (Sundays from 2.30 p.m. to 6 p.m.). It will remain open until August 31.

Following are some of the awards in the architectural decoration section :

Prize (£10) offered by the Bath and Portland Stone Firms, Ltd., for a design for a memorial in Whitbed Portland stone in keeping with the surroundings of a rural churchyard : George Robb, A.R.I.B.A. (Manchester Municipal School of Art).

Prize (£15) offered by the Brewers' Society for a design for a painted inn-sign : Hugh Richard Hosking, of Leicester.

Prize (20 guineas) offered by the British Aluminium Company, Ltd., for a design for the decoration of a cinema vestibule and entrance hall with doors, pay boxes, and staircase leading to the auditorium circle : John Carter, of Rougham, King's Lynn.

Prize (15 guineas) offered by the Incorporated Institute of British Decorators for a design for the decoration of a refreshment room in an airport station : Charles R. Fowkes (L.C.C. Central School of Arts and Crafts).

Consolation Prize of Five Guineas offered by Mr. Lewis J. E. Hooper, for the most meritorious design which has not received recognition in the architectural design section : David J. Smith (Hull College of Arts and Crafts).

Prizes offered by the British Portland Cement Association, Ltd., for designs for a tram or omnibus shelter in concrete :

First Prize (£15) : Charles E. Tooley (School of Architecture, Leeds College of Art). Second Prize (£5) : Keith P. Roberts, of 98, Macclesfield Road, Woodside, S.E.25.

Prizes offered by the Morris-Singer Company for designs for decorative metal and glass shop fronts :

First prize (10 guineas) : William J. Lawrence (Cheltenham School of Arts and Crafts). Second Prize (5 guineas) : Walter F. Martin, of 49, Norman Avenue, Wood Green, N.22.

Prize (£15) offered by Mr. C. A. Richter, Managing Director of the Bath Cabinet Makers' Co., Ltd., for a design for a range of exhibition stands : Rodney Parkinson, of 80, Bingham Road, Croydon.

Competitions Open

September 1.—Sending-in Day. Proposed Hospital at Surbiton. Assessor : C. E. Elcock, F.R.I.B.A. Premiums: £120, £75, £50 and £25. The conditions, obtainable from A. C. C. Dunn, Hon. Secretary, Surbiton Hospital, St. James's Road, Surbiton, were reviewed in *A.J.* for May 24.

September 11.—Sending-in Day. The Directors of Gidea Park, Ltd., invite designs for five different types of house (ranging from £400 to £900). Assessors : Prof. S. D. Adshead, F.R.I.B.A., A. E. Beresford, F.R.I.B.A., Ald. Ewart G. Culpin, F.R.I.B.A., E. Maxwell Fry, A.R.I.B.A., Howard Robertson, F.R.I.B.A., and W. Harding Thompson, F.R.I.B.A. In addition to being paid a fee according to the scale of charges of the R.I.B.A., the authors of the first five selected designs in each class will be paid a premium of £10. Particulars obtainable from Gidea Park, Ltd., The Estate Office, Hare Street, Gidea Park, Romford, Essex. Deposit 5s.

September 21.—Sending-in Day. Proposed Town Hall for the Borough of Hornsey. Assessor : C. Cowles-Voysey, F.R.I.B.A. Premiums : £350, £250 and £150. Full conditions, etc., were published in our issue for May 17.

September 30.—Competition for speculative house designs, organized by the Architectural Association with the co-operation of Messrs. J. Laing and Sons, Ltd. Three types of house are required. Assessors : C. Lovett Gill, F.R.I.B.A. ; L. H. Bucknell, F.R.I.B.A. ; J. R. Leathart, F.R.I.B.A. ; Arthur W. Kenyon, F.R.I.B.A. ; T. Alwyn Lloyd, F.R.I.B.A. ; and J. W. Laing. Premiums : £25 for the design placed first in each group. Copies of the conditions are being issued free, on application, to all members of the Architectural Association, and members of the R.I.B.A. can obtain copies (price 2s. 6d.) from Mr. F. R. Yerbury, General Secretary, The Architectural Association, 34-36, Bedford Square, W.C.1. Full particulars of the competition were published in *A.J.* for July 27.

(For competitions pending, see last issue)

THE MOYNE REPORT

WHY THE NATIONAL HOUSING BOARD *PROPOSAL WAS* TURNED DOWN

[*The Report of the Departmental Committee on Housing, of which Lord Moyne was chairman, has just been presented. Below we give some extracts from the Report; we hope to give an analysis of it in a later issue. Some comments on the Committee's recommendations will also be found in this issue under* Notes and Topics.—ED., *A.J.*]

TERMS OF REFERENCE

To consider and report—

a: What, if any, further steps are necessary or desirable to secure the maintenance of a proper standard of fitness for human habitation in working-class houses which are neither situate in an area suitable for clearance under Part I of the Housing Act, 1930, nor suitable for demolition under Section 19 of that Act; and

b: What, if any, further steps are necessary or desirable to promote the supply of houses for the working-classes, without public charge, through the agency of public utility societies or other bodies subject to similar limitations operating in particular areas or otherwise.

ALTHOUGH, for the reasons which we shall explain, we have been unable to recommend the adoption of certain proposals for a National Housing Board which were put before us, we think that the recommendations which we have made will go a long way towards securing some of the main objects which the advocates of a National Housing Board had in view. We have tried, however, so to frame our proposals as to avoid certain obvious dangers which were inherent in theirs.

Comprehensive proposals for a National Housing Board, operating through independent local Public Utility Societies, were outlined to us by Sir Raymond Unwin and a group of persons associated with him. The financial basis of the proposals was a public loan, the principal and the greater part of the interest on which was to be guaranteed by the Government.

The proposals assumed the inability of private enterprise to provide an adequate supply of new houses of good quality at rents within the means of the poorer workers; and the position of Local Authorities in relation to the Public Utility Societies, and of the Ministry of Health in relation to the Housing Board, were not precisely defined. We have carefully considered this evidence and also examined a later and more detailed memorandum which was furnished at our request in regard to the financial details of the proposals.

We are precluded by our terms of reference from considering any proposals for the provision of new houses at large which would involve a public charge. It was contended, however, by Sir Raymond Unwin that, although a Government guarantee would be needed in order to secure the capital on terms which would admit of sufficiently low rents, the finances of the Board could be so arranged as to safeguard the Exchequer against any call on the guarantee. . . . The major consideration, as it seems to us, is that it is difficult both to claim that a Government guarantee is necessary and at the same time to contend that in no circumstances will any call be made upon it. If we may put it in another way, it is the very uncertainty of the income from small house property which is the reason for the comparatively high rate of interest on which the private investor bases rents, and the difference between this rate and the rate payable on gilt-edged securities may be regarded as the market estimate of the measure of that uncertainty; the yield does not become more certain merely because a low expectation is announced beforehand. To base rents on a yield below market requirements and at the same time to claim that the ultimate yield will as a matter of certainty be equivalent to the yield on gilt-edged securities is merely to challenge the market estimate of the security, and we should not feel justified in preferring the view of the promoters of the scheme to that of the investment market.

We are, therefore, not convinced that the scheme put before us by Sir Raymond Unwin and his associates would not involve a public charge, and if only for this reason we should regard ourselves as precluded by our terms of reference from recommending its adoption.

In view, however, of the public attention which has been given to these and similar proposals which have been placed before us by other witnesses, we think it desirable to indicate briefly the reasons why, on the information before us, we should feel unable to recommend their adoption, even if we were not prevented from so doing by the limitation in our terms of reference.

In the first place, it would clearly be out of the question to extend to ordinary private enterprise trading for profit, similar facilities to those proposed for a national housing board, and, in the absence of such facilities, private enterprise, having just escaped from the subsidized competition of Local Authorities under the Act of 1924, would be exposed to a new form of subsidized competition by a large-scale public utility enterprise financed on long-term money and at gilt-edged rates. It was strongly represented to us by the National Association of Building Societies and the National Federations of Housebuilders and Property Owners that competition of this character would effectively prevent private builders and private investors from re-entering the field of working class housing.

It was contended by some advocates of a national housing corporation that if the corporation were confined to providing houses at low rents for the poorer workers there was no reason why ordinary private enterprise should not provide houses to let at higher rents for the better paid workers. This contention, however, seems to us to be fallacious. The difference in the type of house provided would be negligible (indeed some of the advocates of the housing corporation contended that their houses would be better than houses provided by private enterprise), but the difference in rents would be considerable owing to the higher interest required by private enterprise, the shorter period of repayment, and the necessity for some margin of profit.

It follows, therefore, in our view that we could not properly recommend the Government to finance a public utility organization on the proposed lines until and unless we were satisfied that the time had come when, in the words of the Committee on Local Expenditure, "the provision of housing accommodation for such of the working classes as are not in a position to buy their houses will have become finally and exclusively the function of public authorities." The Government's policy of encouraging private enterprise to return to this field is only a few months old, and we agree with the view of the Association of Municipal Corporations that it is premature at this stage to consider alternative plans for meeting a situation which could only arise if that policy should fail. We decline to play the part of undertakers at a premature burial.

Moreover, if private enterprise should fail, we are not satisfied on the evidence which has been brought to us that the appropriate remedy would not be found in the provision of unsubsidized houses by the Local Authorities, whose skilled staffs and organizations are actually in being. We are not satisfied that a public utility organization could build more cheaply than Local Authorities and, as we have already explained, there would be no substantial difference in the rate of interest on which rents would be based; indeed there would be a slight difference in favour of the Local Authorities.

It was contemplated by Sir Raymond Unwin that the Local Authorities would be fully occupied with their programmes of slum clearance, but he was also insistent that slum clearance was only a part of the housing problem which ought to be looked at and dealt with as a whole. We agree with this latter view, and we have already pointed out that questions of slum clearance are outside our terms of reference, and we should therefore be unable to recommend the transfer of this work to Public Utility Societies even if we so desired.

It is true that Sir Raymond Unwin proposed that those Local Authorities who desired to continue their operations should be allowed to do so, but he seemed to contemplate the ultimate though gradual supersession of Local Authorities by the public utility organization; other advocates of a National Housing Corporation on the other hand seemed to contemplate the almost immediate supersession of Local Authorities. Whether the supersession proposed is immediate or gradual, an issue of the first importance to local government is raised, on which the time for a final decision has not yet arrived. If the private enterprise policy of the Government were to fail and the housing of the working classes were to become generally recognized as exclusively a social service, the question of principle would clearly require to be settled.

While we think that it would be premature to pronounce a final opinion on this issue, we have no hesitation in recording our opinion that no sufficiently strong case has been made to us for the creation at this juncture of a new organization, the establishment of which would finally drive private enterprise from the field and would also in our view deter some Local Authorities from the urgent task of slum clearance. Moreover, the transition from the old to the new regime would necessarily take a considerable time during which little or nothing would be done either by the old or the new agencies.

In coming to this conclusion we have not overlooked the criticisms which are levelled at local housing administration and some of which have been brought to us in evidence. It seems to us, however, that they should be considered in relation to the magnitude of municipal housing operations since the War and, unless the evils of the system are more widespread than we have reason to suppose, they do not seem to us to constitute a sufficient reason for the replacement of Local Authorities at this stage by a completely new organization. More cogent evidence than has been presented to us would in our opinion be required before Parliament should decide to discard the accumulated experience of fourteen years of municipal housing in order to experiment with a new and untried organization.

We have dealt at some length with Sir Raymond Unwin's proposals, as the general principles involved in their consideration arise also on other proposals put forward by other witnesses.

Lord Eustace Percy made proposals somewhat similar to those made by Sir Raymond Unwin except that he contemplated :—

(*a*) that the central organization should normally work through local agencies and not through independent local Public Utility Societies; and

(*b*) that the houses to be provided by those agencies should contain a proportion of larger houses on the principle of a "mixed bag," in order that the financial risks might be spread over different categories of property.

He did not in terms suggest a Government guarantee, but he indicated no other means by which the necessary finance could be raised over a sufficiently long period at sufficiently low rates of interest.

More ambitious proposals for a National Housing Corporation were put before us by Mr. Rees and Mr. Nicholson, who advocated the formation under Government auspices of a centralized organization for the building of houses, which should be vested when built in the local authorities or in subsidiary house-holding companies. These proposals also assumed the inability of private enterprise to provide houses at sufficiently low rents for the poorer workers. Various schemes for financing the proposals were put forward, but all were dependent in varying degrees on a Government guarantee.

Mr. Rees and Mr. Nicholson represented to us the advantages which, in their view, would accrue from the bulk purchase of materials (a point which was also stressed by Sir Raymond Unwin), and from planning and building on a national scale. We are not satisfied, however, that the provision of houses for the working classes is a service which lends itself readily to the large scale methods of a highly centralized organization of this character. Bulk supply postulates bulk demand, whereas the demand for houses and the types of houses required both depend on local conditions and local circumstances which vary greatly.

We think, indeed, that private enterprise and some of the larger local authorities may find it desirable and, on a long view, economical to undertake schemes on a larger scale than has been usual hitherto. There is nothing to prevent such authorities as, for example, the London County Council or the Councils of such great cities as Birmingham, Liverpool and Manchester from undertaking projects on the largest scale. We think that they should be encouraged to do so, but we do not think that they would be either encouraged or assisted by the establishment of a centralized building organization.

In theory no doubt there is much to be said in support of the view that bulk purchase may result in large economies; on the other hand, it may well be urged that, while conditions today are different from those prevailing immediately after the War, actual experience of large-scale purchase by public authorities suggests that the effect may be, not to reduce, but to increase prices. We understand that (apart from a shortage of bricks, which we are assured is only temporary) the supply of building materials is at present fully adequate to the demand.

For these reasons we should be unable to recommend the adoption of any of the proposals which were put before us by the various witnesses for a National Housing Board or Corporation, even if we were not satisfied that the proposals fell outside our terms of reference. We have, however, incorporated a number of Sir Raymond Unwin's suggestions in the constructive proposals which we have made under paragraph (*a*) of our terms of reference.

SUMMARY OF PRINCIPAL RECOMMENDATIONS

GENERAL SCHEME OF THE PROPOSALS

1. Local Authorities should be given compulsory powers and encouraged to acquire, for reconditioning, working-class houses which are not in all respects fit for human habitation but can be made fit and to which a probable life of at least twenty years can be given. (Paras. 34, 38, 42.)

2. Where an approved Public Utility Society exists or can readily be formed, the houses should normally be acquired on behalf of the Society who will repair, improve and manage them. (Paras. 38, 42.)

3. In the absence of such a Society, the Local Authorities should be empowered to lease the houses to House Management Commissioners, who would be appointed by and ultimately responsible to the Local Authority, but should be given full discretion and independence in regard to the details of administration. (Paras. 41-42.)

4. Where neither of the alternatives referred to in 2 and 3 above is practicable, the Local Authority should be empowered to hold, repair and manage the houses themselves. (Para. 42.)

5. Management should be based on the Octavia Hill system and wherever practicable

women housing estate managers should be employed. (Paras. 23, 42.)

6. In suitable cases the Local Authority or the approved Public Utility Society should be authorized to demolish the acquired houses with a view to obtaining a rehousing site (para. 54), or to acquire them with this original intention. (Para. 35.)

7. Power should be given to the acquiring authorities to acquire in suitable cases fit properties for the purpose of securing a convenient area for management or to facilitate ultimate redevelopment. Such properties should be acquired on the basis of market value as modified by Part II of the Third Schedule to the Housing Act, 1930. (Para. 51.)

8. Approved Public Utility Societies should be given such powers of entry as will enable them to exercise effectively the powers which we propose for them. (Para. 42.)

CENTRAL PUBLIC UTILITY COUNCIL

9. A strong Central Public Utility Council should be appointed by the Minister of Health.*

BASIS OF COMPENSATION

10. The basis of compensation payable to the expropriated owners or lessees should be the "refund" basis, i.e., the price to be paid by the acquiring authority should be—

(a) the purchase price paid by the owner, or

(b) if the owner inherited the premises, its principal value accepted for death duties when they passed to him, or

(c) if the owner acquired the houses by deed of gift, the value adopted for stamp duty purposes,

(d) in the case of leasehold interests the payment should be such an apportioned part of the purchase price, or the principal value accepted for death duties, or the value adopted for stamp duty purposes, as the number of years of the lease unexpired at the date of acquisition by the acquiring authority bears to the number of years unexpired at the date of acquisition by the lessee.

11. It is suggested for consideration that the new basis of compensation should be made applicable to any working-class houses which are not in all respects fit for human habitation and are to be acquired by any public authority (as defined in section 12 (2) of the Acquisition of Land (Assessment of Compensation) Act, 1919), for any statutory purpose, subject to the usual departmental consents. This suggestion does not extend to demolishable houses for which the site value basis of compensation is prescribed by the Housing Acts. (Para. 37.)

PROPOSED RE-HOUSING SUBSIDY

12. Exchequer grants should be available in urban areas in aid of the re-housing accommodation provided to abate overcrowding in the acquired houses. (Para. 52.)

CONDITION OF SUBSIDY

13. The principal condition on which these subsidies should be payable should be that the

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*80. The principal functions of the Central Council would be :—

(a). Subject to the general directions of the Minister of Health, to stimulate the formation, and supervise the operations, of Public Utility Societies and generally from time to time to give such help and guidance as the Societies may need.

The Garden Cities and Town Planning Association already perform a valuable work in the promotion and assistance of Public Utility Societies, and the Central Council might be able to arrange for some of this part of their work to be undertaken by the Association. It would, in any case, be necessary to work in close cooperation with the Association.

(b) To advise and make recommendations to the Minister as to the approval of such Societies for the purpose of the local administration of our proposals where they are not carried out by the Local Authorities.

(c) To advise and make recommendations to the Minister in regard to the proposals of Public Utility Societies or Local Authorities for the acquisition, repairing and managing of properties.

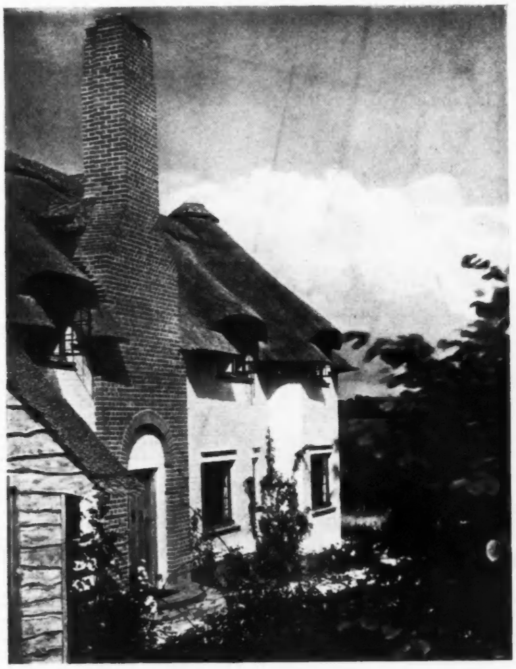
(d) To advise and make recommendations to the Minister as to the amount of advances to be made to Public Utility Societies.

(e) To study and advise the Minister, Local Authorities and Public Utility Societies in regard to questions of house management ; and to take steps to ensure an adequate supply of trained property managers.

(f) To study and collate information and experience as to the best methods of different kinds of reconditioning.

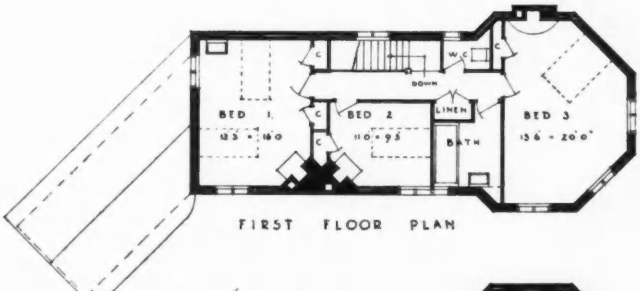
(g) To facilitate and encourage co-operation between local Housing Authorities, Public Utility Societies and private persons interested in voluntary housing activities.

A COTTAGE IN NORFOLK

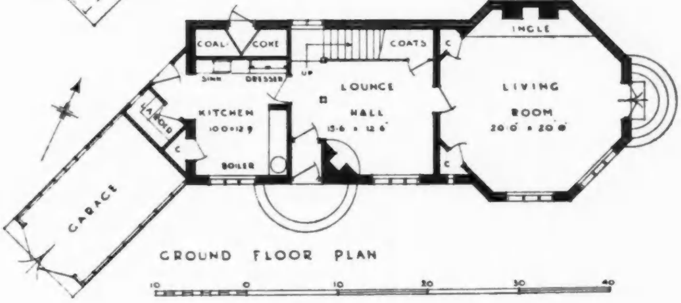


This cottage is built with eleven-inch cavity brick walls and a Norfolk reed thatch roof. It is essentially a week-end cottage, and the use of thatch ensures an even temperature throughout the year, whether the cottage is occupied or shut up. The internal joinery and beams are in English oak, the floors are of oak blocks and the casement windows of steel with leaded lights.

The plans of this cottage, as are all plans published in the JOURNAL, *are the copyright of the architect, and may not be "borrowed" by speculative builders.*



FIRST FLOOR PLAN



GROUND FLOOR PLAN

DESIGNED BY KENNETH DALGLIESH

rents to be charged should not exceed on the average 2s. 9d. (exclusive of rates) per habitable room in tenements of more than three storeys on expensive sites, and 1s. 6d. (exclusive of rates) per habitable room in any other new accommodation. (Paras. 55-56.)

These rent conditions would mean an average rent of 8s. 9d. per week (exclusive of rates) for a normal three-roomed tenement and of 6s. per week (exclusive of rates) for a normal three-bedroomed house. (Para. 57.)

LOAN FACILITIES FOR APPROVED PUBLIC UTILITY SOCIETIES

14. The Central Financing Authority should be empowered to advance to approved Public Utility Societies the sums required to enable the Societies to acquire and recondition the acquired properties, provided that the loan charges on the amount advanced should not exceed the estimated rental income on the properties after overcrowding has been abated and an adequate allowance has been made for repairs, maintenance, etc. (Paras. 66-67.)

RURAL HOUSING

15. Greater use should be made of the facilities provided by the Housing (Rural Workers) Acts, 1926 and 1931.

VOLUNTARY SCHEMES BY PRIVATE OWNERS AND PUBLIC UTILITY SOCIETIES

16. Private owners of property, including Public Utility Societies, should be given the statutory right to submit voluntary clearance or improvement schemes direct to the Minister, provided that such schemes are limited (a) to schemes agreed with all owners and lessees, and (b) to properties not included in clearance areas under the Local Authorities' five-year programmes. The Minister, before approving the schemes, should obtain the views of the Local Authority and arrange for an inspection of the properties.

FURTHER POWERS FOR CLOSURE OF INSANITARY BASEMENTS OR OTHER PARTS OF HOUSES

17. Local authorities should be empowered to close for all purposes of human habitation unfit parts of houses (including unfit basements) whether let separately or not ; and the Minister should be empowered to pay subsidy (on the reduced basis recommended above) in respect of the new accommodation provided to rehouse the displaced persons. (Para. 93.)

BACK-TO-BACK HOUSES

18. The Minister should be empowered to pay subsidy (on the reduced basis recommended above) in aid of the rehousing of persons necessarily displaced from back-to-back houses or other houses of obsolete planning which are acquired and converted under our proposals. The Minister should also be empowered to pay the subsidy where Local Authorities require or are able to induce private owners to convert such houses, and displacements necessarily result. (Para. 94.)

OBSTRUCTIVE BUILDINGS

19. The power which was contained in Section 19 of the Housing Act, 1925, and was repealed by the Act of 1930, to deal with obstructive buildings should be restored. Compensation should be payable on the basis of market value provided that the properties are in all respects fit for human habitation. (Para. 95.)

TYPES OF DWELLING

20. Private enterprise and Local Authorities in providing new houses at large should be encouraged to provide in future a larger proportion of small dwellings for the small family groups who, according to the latest census figures, constitute nearly 50 per cent. of all families in many of the large towns.

PROVISION OF NEW HOUSES (WITHOUT PUBLIC CHARGE) BY PUBLIC UTILITY OR OTHER SUCH SOCIETIES

21. The Committee reject the various proposals for a National Housing Board or Corporation in the form or on the scale in which they were put before them. Their reasons are given in paragraphs 105-125 of the Report.

LETTERS FROM READERS

J. ROGER HALE, P.A.S.I.

T. TALIESIN REES, F.R.I.B.A., F.S.I.

AN ARCHITECT

The Institute of Registered Architects

SIR,—After all the fuss and bother to obtain the Registration Act, members of the Institute that obtained it, scorn it ! And why ? Because a few people outside their Institute have managed to register and so claim to be their equals. Why should these people who, probably through circumstances out of their control are unable to qualify for membership of the recognized institutes, etc., be denied some means of displaying to the layman and others that they are as good as the members of these institutes. Possibly, like myself, they have qualified in another institution, but through change of opinions, wish to be associated with the architectural world.

Anyway, if my application for admission to the Register is successful, I shall support the Institute of Registered Architects, which I suggest should be organized and supported by members of all the institutes in any way connected with the architectural profession.

An Institute of Registered Architects could concentrate on safeguarding the designation " M.Inst.R.A." and leave examinations, conferences, etc., to those bodies that are already concerned with them.

J. ROGER HALE

Sir,—I note that your leading article in last week's issue dealt with the proposed foundation of another Architectural Society. I would have thought that such an Institution was unnecessary and that the Royal Institute of British Architects was sufficiently large and broad to meet all the requirements of practising and assistant architects. The founders of the proposed new body appear to think otherwise, but the reasons they give, I fear, will fail to convince any architects of sense.

If these gentlemen who have formed themselves into the New Council consider that the Royal Institute of British Architects has shortcomings or requires gingering up, would it not be wiser for them to join—if qualified—and place their views before the R.I.B.A. Council ?

You mention in your leading article that one of the reasons for the new Society is to prevent registered architects from advertising individually in the press like a departmental store. But is there any difference between advertising in the press like a departmental store, and using a departmental store for the exhibition of architectural drawings, delivering an address at such exhibition and incidentally advertising oneself and one's work. I fail to see it. The latter has been done on more than one occasion and by eminent architects.

This pernicious mode of advertising could easily be put down without the formation of another Institute of Architects.

T. TALIESIN REES

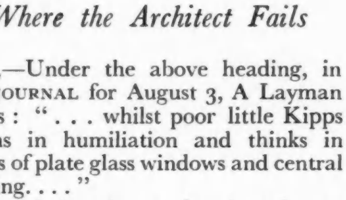
Where the Architect Fails

SIR,—Under the above heading, in the JOURNAL for August 3, A Layman states : " . . . whilst poor little Kipps listens in humiliation and thinks in terms of plate glass windows and central heating. . . . "

I have designed many housing schemes and am continually making designs for speculative builders, and I only wish your contributor were correct in his remarks.

Kipps *wants* and therefore gets the stuff we see erupting all over the countryside; Tudor (*sic*) and more Tudor, which he eats greedily and asks for more. The first question the speculative client asks is : "Cannot I paint or nail on some half timber ? And 'Mrs. Kipps' wants some coloured lead lights in those double hung sashes, and she wants casements to these rooms, and don't show gas fires or central heating, she will have coal fires throughout "—and so on.

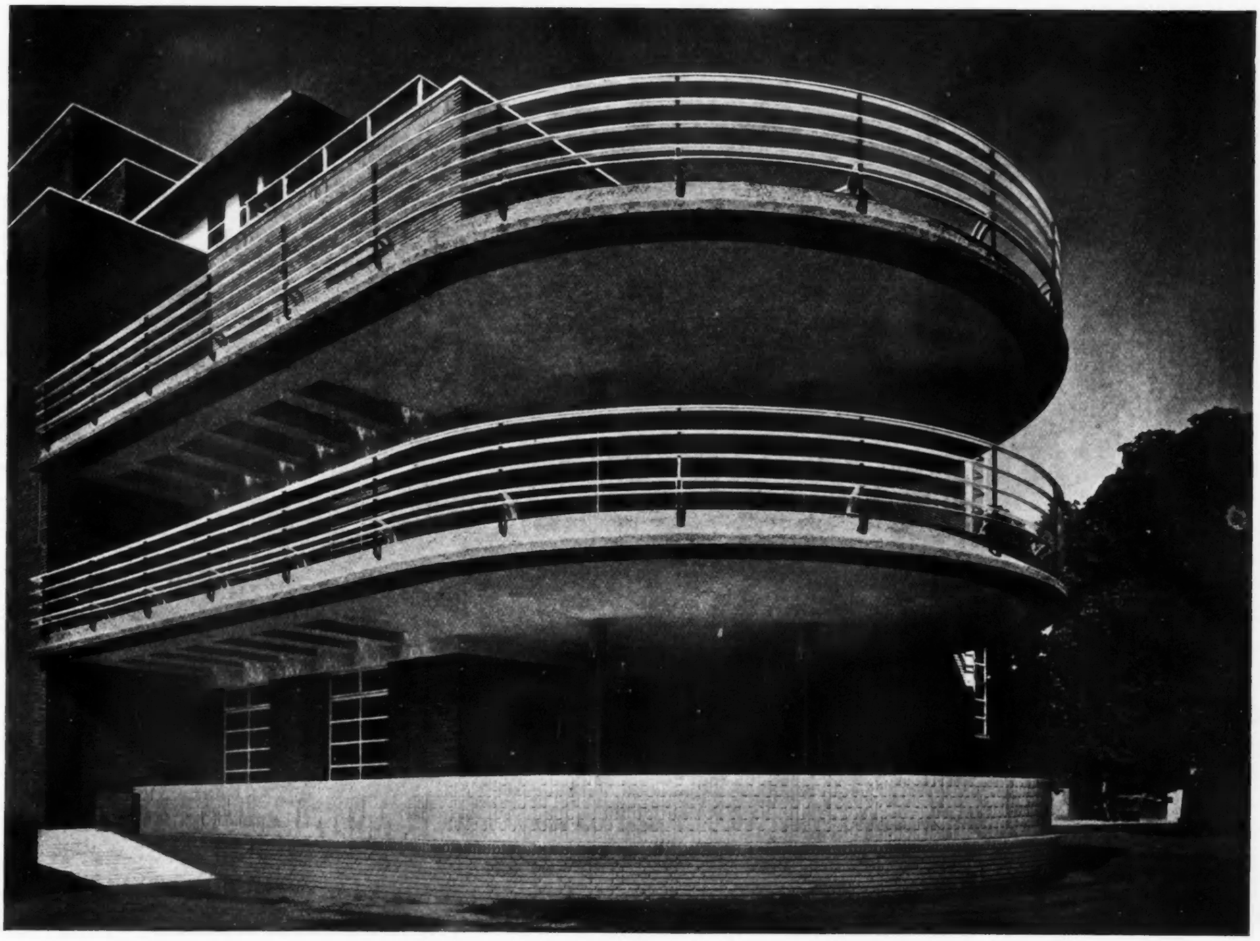
AN ARCHITECT



Change of Address

Mr. R. B. Selby, A.R.I.B.A., has removed his offices to Premier House, 48, Dover Street, Piccadilly, W.1.

THE ROYAL MASONIC HOSPITAL

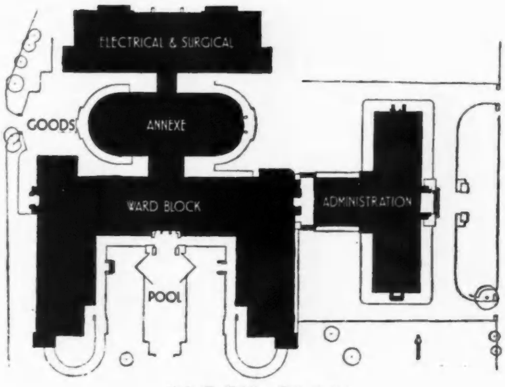


THE WARD BLOCK

In last week's issue were illustrated three of the four units of which this hospital consists: the Administration Block, the Surgical and Electrical Treatment Block and the Annexe. The fourth unit, the Ward Block, is illustrated on this and the following eight pages. Plans of typical floors are given, together with the standard lay-out plans of ward and sanitary units.

The photograph above shows one of the sun balconies that form the southern extremities of each wing of the Ward Block. Constructional details of these balconies are given in the supplement.

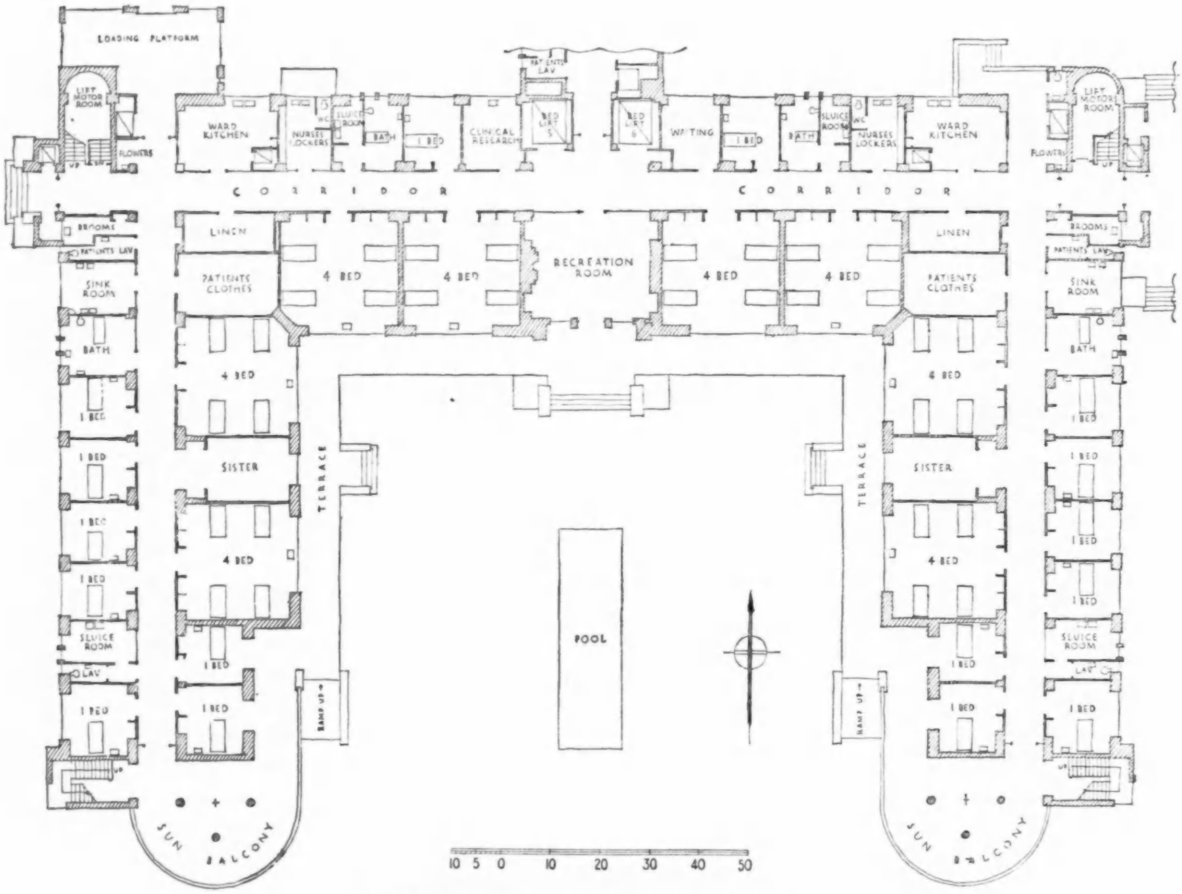
The building is of steel-frame construction with staircases and balcony trimmings in reinforced concrete, and is faced with 2-inch red bricks, laid in Flemish garden bond with a wide joint.



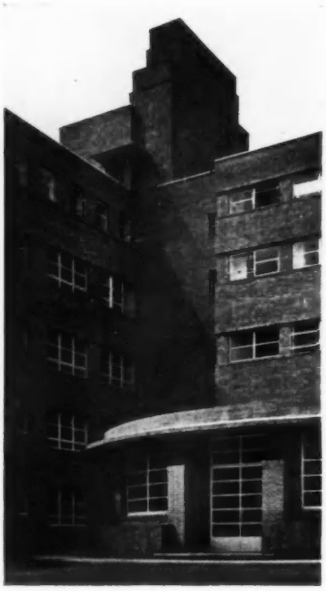
BLOCK PLAN

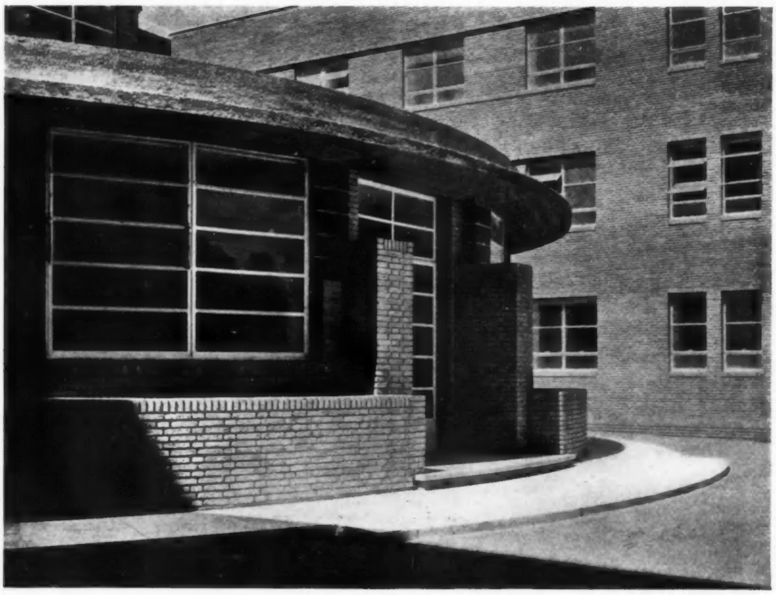
DESIGNED BY SIR JOHN BURNET, TAIT AND LORNE

THE ROYAL MASONIC

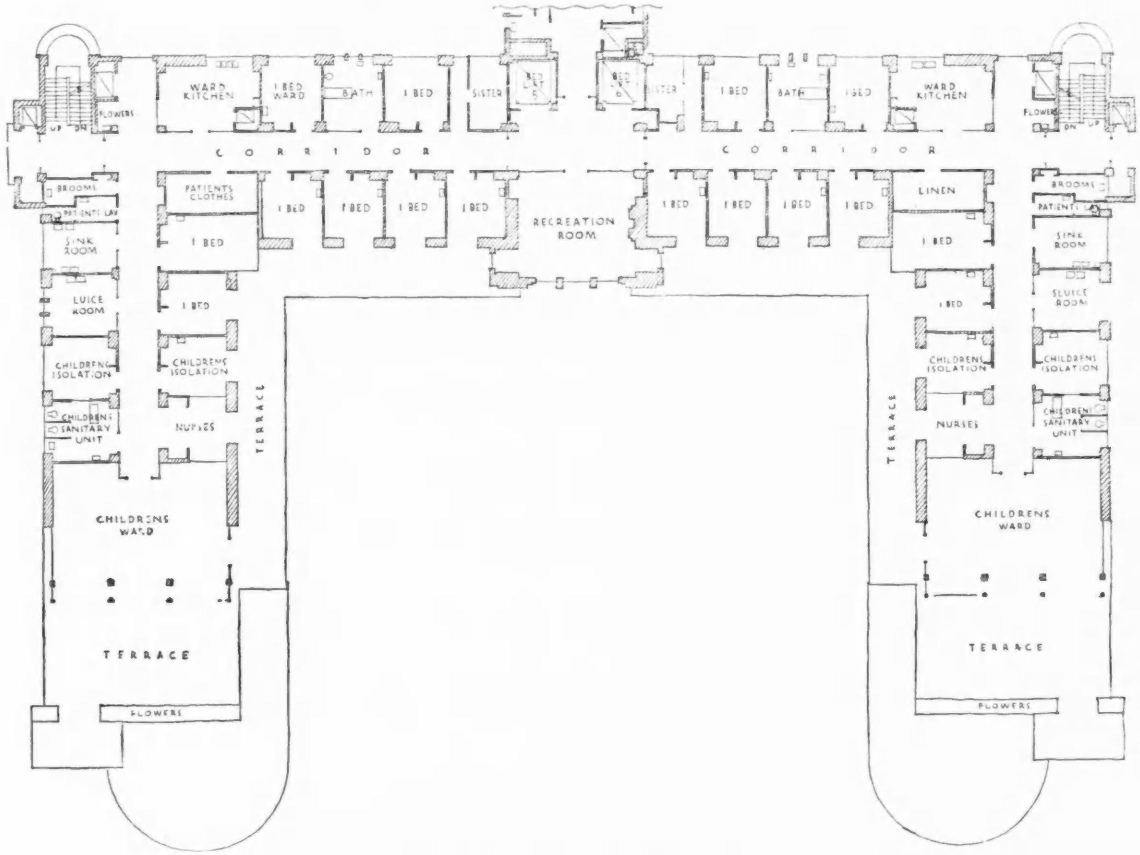

LOADING PLATFORM
LIFT MOTOR ROOM
FLOWERS
WARD KITCHEN
NURSES LOCKERS
WC
SLUICE ROOM
BATH
1 BED
CLINICAL RESEARCH
PATIENTS LAV
BED LIFT 5
BED LIFT 6
WAITING
1 BED
BATH
SLUICE ROOM
WC
NURSES LOCKERS
WARD KITCHEN
LIFT MOTOR ROOM
FLOWERS
CORRIDOR
CORRIDOR
BROOMS
PATIENTS LAV
SINK ROOM
BATH
1 BED
1 BED
1 BED
1 BED
SLUICE ROOM
LAV
1 BED
LINEN
PATIENTS CLOTHES
4 BED
4 BED
RECREATION ROOM
4 BED
4 BED
LINEN
PATIENTS CLOTHES
4 BED
SISTER
4 BED
1 BED
1 BED
TERRACE
TERRACE
POOL
RAMP UP
RAMP UP
SUN BALCONY
SUN BALCONY
10 5 0 10 20 30 40 50

GROUND FLOOR PLAN





HOSPITAL: WARD BLOCK


WARD KITCHEN
1 BED WARD
BATH
1 BED
SISTER
SISTER
1 BED
BATH
1 BED
WARD KITCHEN
FLOWERS
UP
DN
FLOWERS
DN
UP
CORRIDOR
CORRIDOR
BROOMS
PATIENTS LAV
PATIENTS CLOTHES
1 BED
1 BED
1 BED
1 BED
RECREATION ROOM
1 BED
1 BED
1 BED
1 BED
LINEN
BROOMS
PATIENTS LAV
SINK ROOM
1 BED
1 BED
SINK ROOM
LUICE ROOM
1 BED
1 BED
SLUICE ROOM
CHILDRENS ISOLATION
CHILDRENS ISOLATION
CHILDRENS ISOLATION
CHILDRENS ISOLATION
CHILDRENS SANITARY UNIT
NURSES
TERRACE
TERRACE
NURSES
CHILDRENS SANITARY UNIT
CHILDRENS WARD
CHILDRENS WARD
TERRACE
TERRACE
FLOWERS
FLOWERS

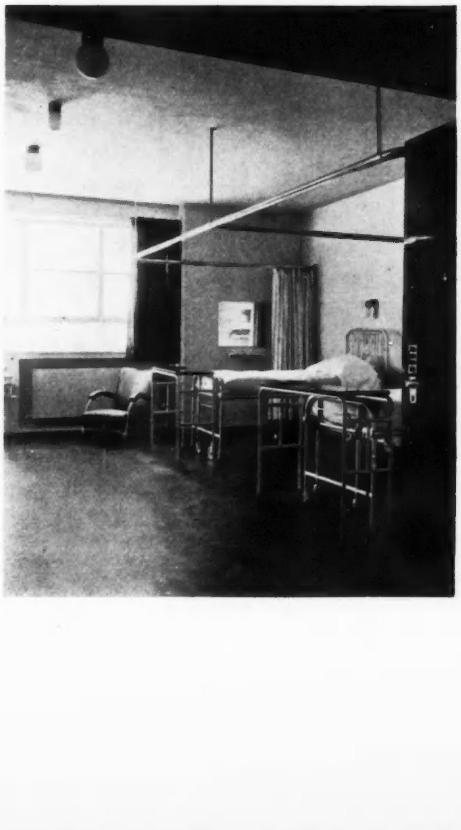
THIRD FLOOR PLAN

The Ward Block has been planned so that the majority of the actual wards overlook the courtyard which faces south, in order to give them a maximum amount of sunshine and quiet. It is five floors in height, of which four are devoted entirely to wards and their ancillary service rooms, and the top floor to the kitchens.

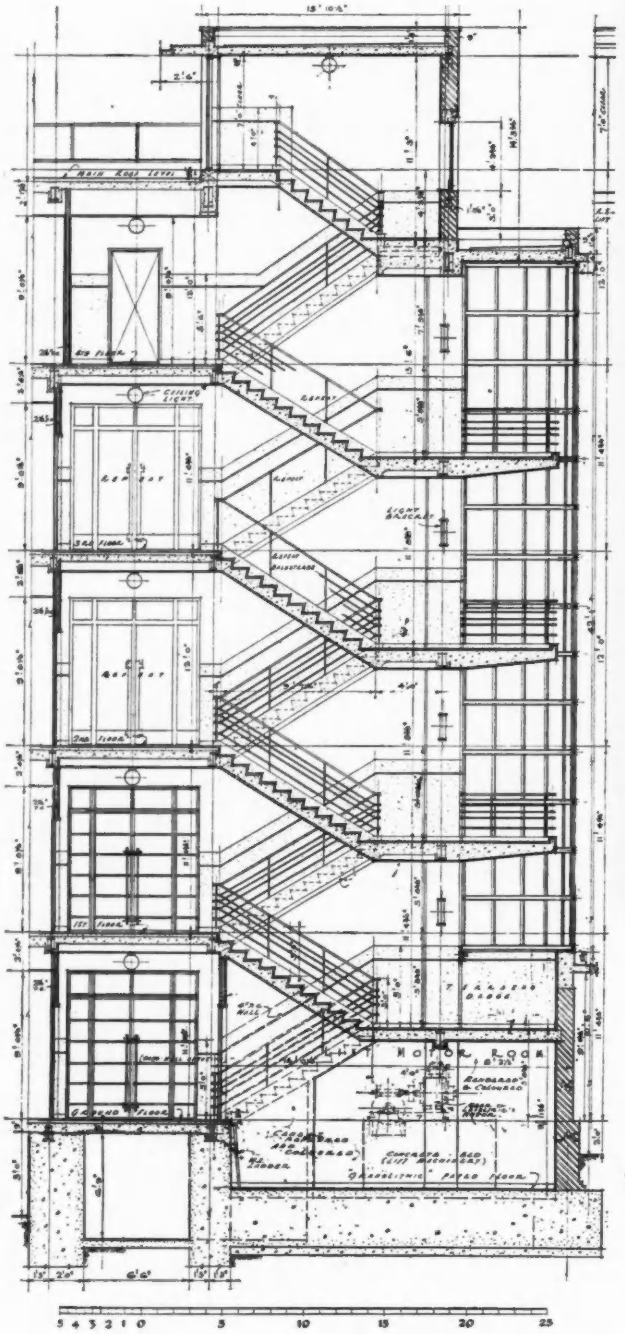
Each ward-floor is divided into two equal parts, each part forming a complete nursing unit. A unit comprises four-bed, two-bed and single-bed wards, bathrooms, sluice-rooms and sink-rooms, a ward kitchen, a patients' clothing store, a flower room, a Sisters' room and an open balcony 35 ft. in diameter, facing south. Each ward-floor also contains, common to both nursing units, a recreation room for the use of convalescent patients and their visitors. All ward-kitchens have direct lift-communication with the main kitchens on the fourth floor.

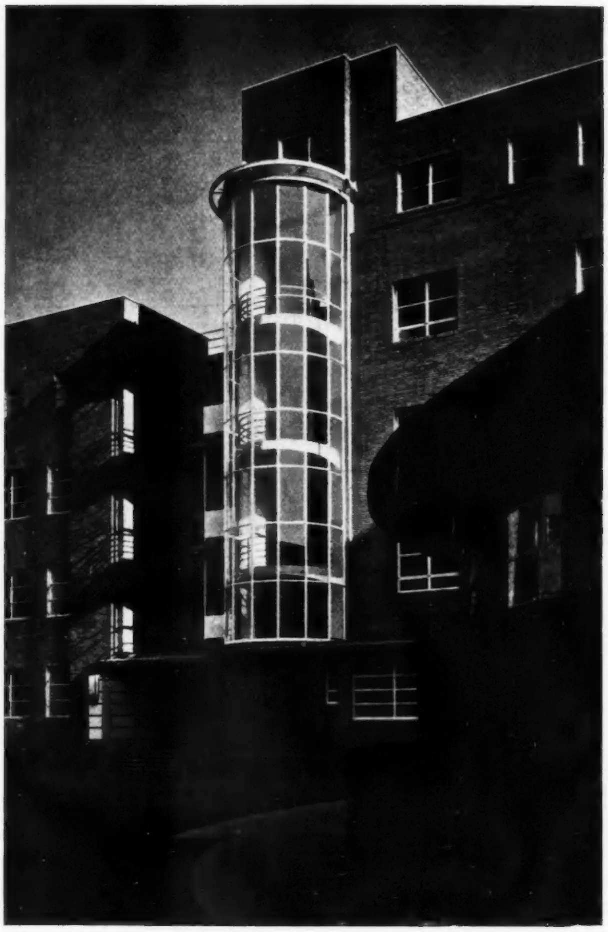
The two plans show the ground floor of the Ward Block (a typical ward-floor as described above) and the third floor containing the Children's Wards.

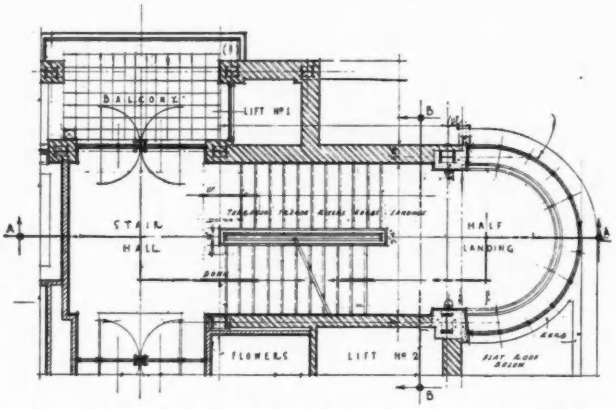
The three photographs show; left to right, the north side of the Ward Block with the boiler stack and the entrance for ambulance patients, a closer view of the same entrance, and an interior view of one of the four-bed wards.



THE ROYAL MASONIC HOSPITAL:


MAIN ROOF LEVEL
4TH FLOOR
3RD FLOOR
2ND FLOOR
1ST FLOOR
GROUND FLOOR
MOTOR ROOM
CEILING LIGHT
LIGHT BRACKET
5 4 3 2 1 0 5 10 15 20 25

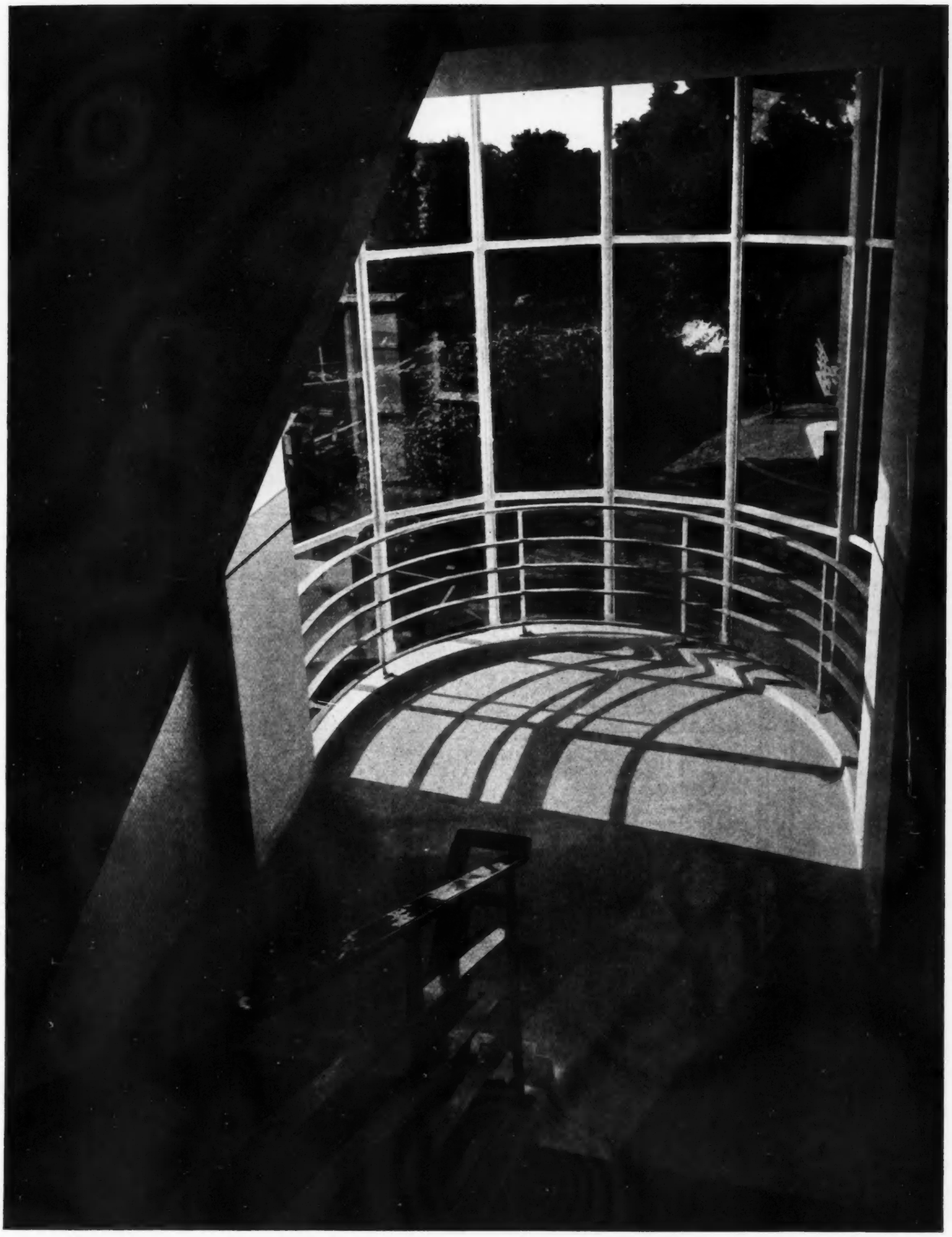



BALCONY
LIFT No 1
STAIR HALL
HALF LANDING
FLOWERS
LIFT No 2
A
A
B
B

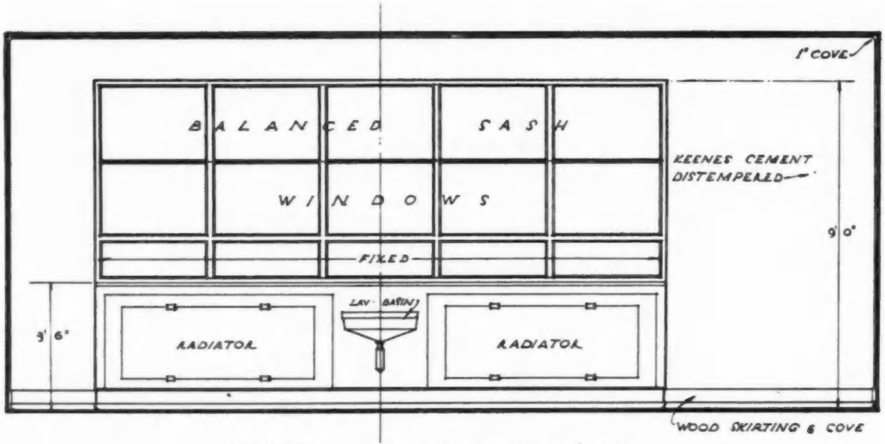
A longitudinal section, plan and exterior and interior views of the staircases situated at the north-east and north-west corners of the Ward Block. These staircases are of reinforced concrete, with semi-circular cantilevered landings, which are continuous with the stairs themselves. From these landings are hung the metal window frames, the vertical bars being self-supporting for the full height of the bay window. The metal cornice provides a hanging for window-cleaning cradles.

The stairs are finished in terrazzo with a terrazzo dado, and metal handrail.

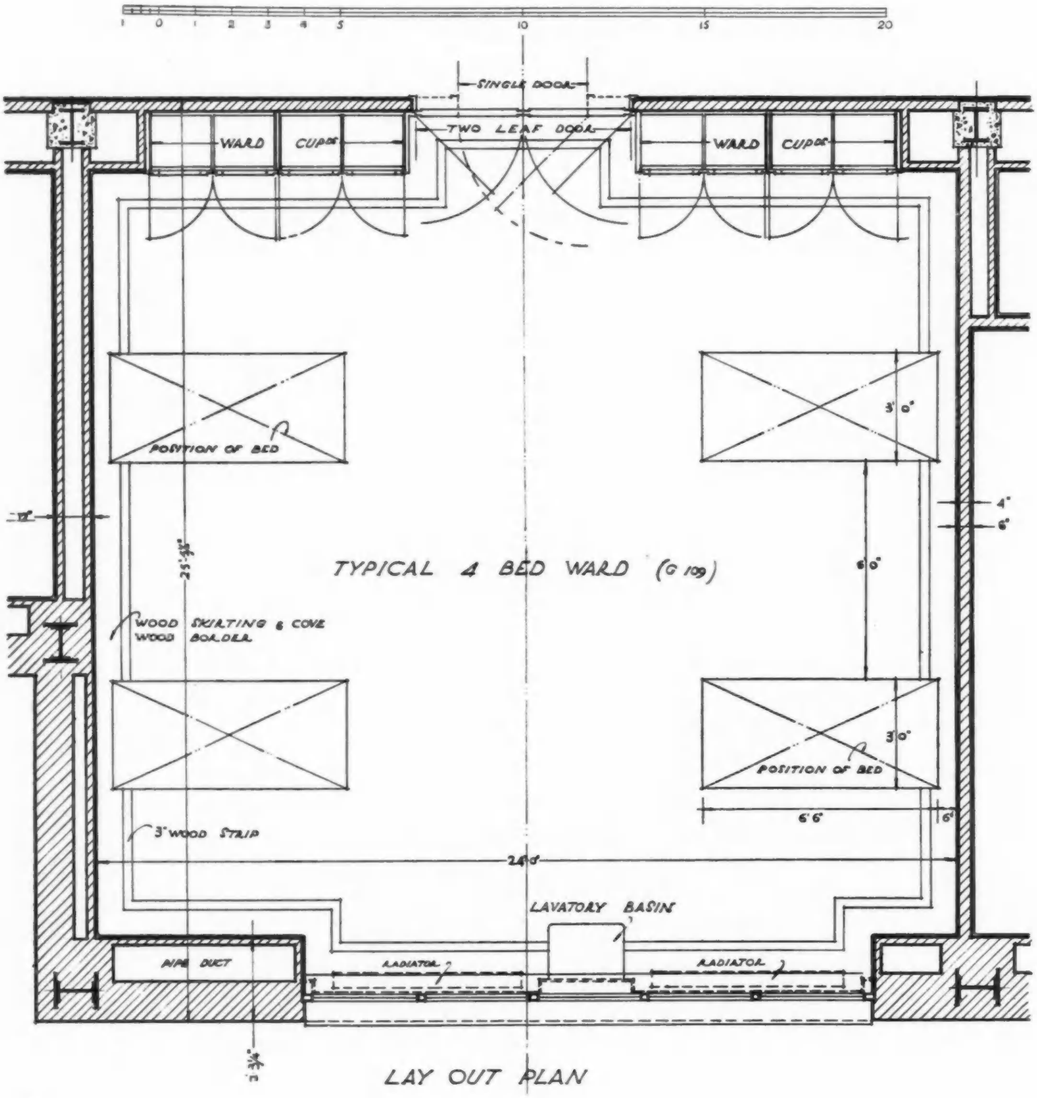
WARD BLOCK STAIRCASE



THE ROYAL MASONIC

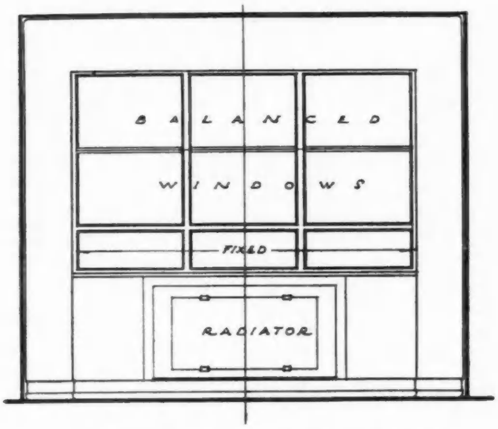

1" COVE
BALANCED SASH
WINDOWS
FIXED
KEENES CEMENT DISTEMPERED
9' 0"
3' 6"
LAV. BASIN
RADIATOR
RADIATOR
WOOD SKIRTING & COVE

TYPICAL 4 BED WARD (G-109)
ELEVATION OF WINDOW WALL

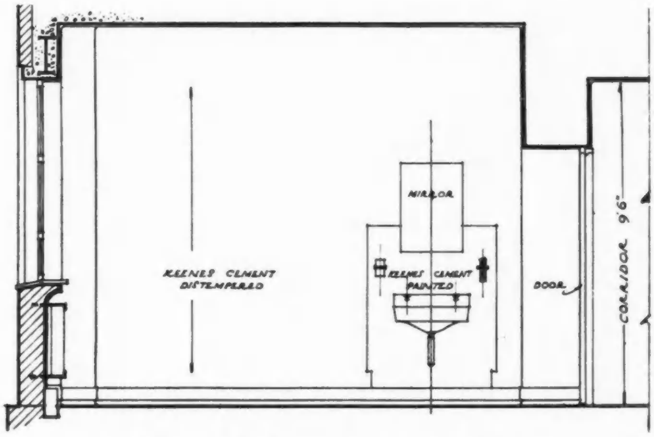

1 0 1 2 3 4 5 10 15 20
SINGLE DOOR
TWO LEAF DOOR
WARD CUPDS
WARD CUPDS
POSITION OF BED
3' 0"
4"
6"
6' 0"
23' 9½"
TYPICAL 4 BED WARD (G 109)
WOOD SKIRTING & COVE
WOOD BORDER
3' 0"
POSITION OF BED
6' 6"
6"
3" WOOD STRIP
24' 0"
LAVATORY BASIN
PIPE DUCT
RADIATOR
RADIATOR
2' 3½"

LAY OUT PLAN

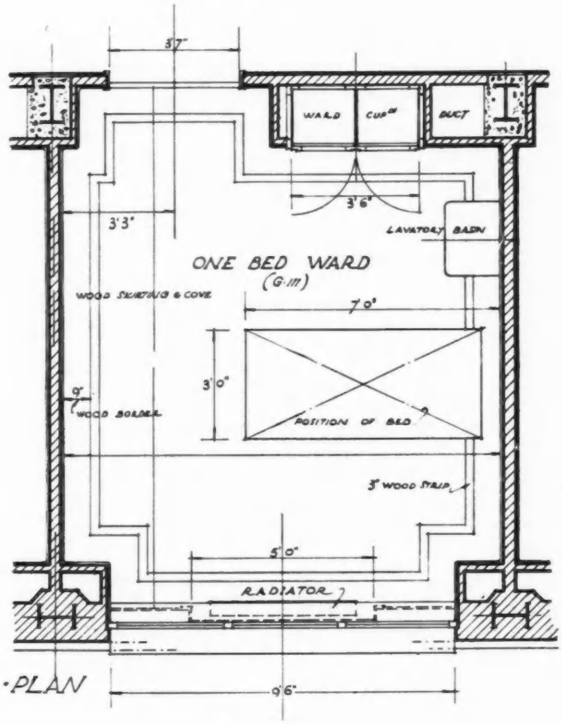
HOSPITAL: LAY-OUT OF WARDS


BALANCED
WINDOWS
FIXED
RADIATOR

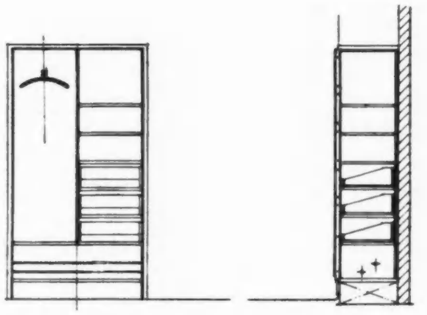
ELEVATION OF WINDOW WALL


KEENES CEMENT DISTEMPERED
MIRROR
KEENES CEMENT PAINTED
DOOR
CORRIDOR 9'6"

ELEVATION TYPICAL PARTITION WALL


3'7"
WARD CUPD
DUCT
3'6"
3'3"
LAVATORY BASIN
ONE BED WARD
(G.111)
WOOD SKIRTING & COVE
7'0"
3'0"
9"
WOOD BORDER
POSITION OF BED
3" WOOD STRIP
5'0"
RADIATOR
9'6"

·PLAN



ELEVATION (DOORS REMOVED) SECTION

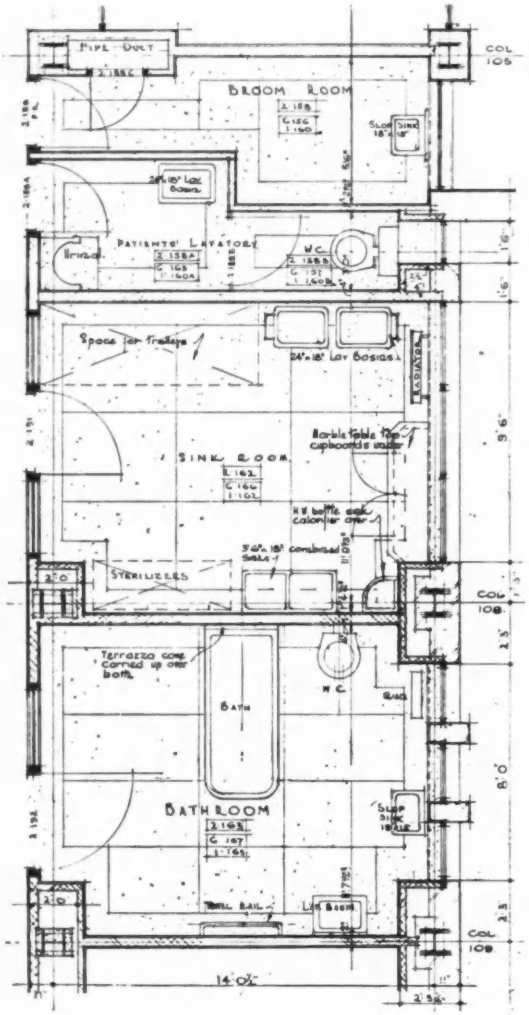
WARD CUPBOARDS

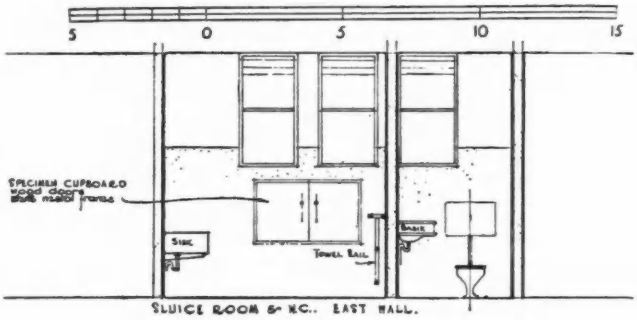
1
0
1
2
3
4
5
10
15

Plans and typical elevations of the four-bed and single-bed wards which are standardized throughout the hospital.

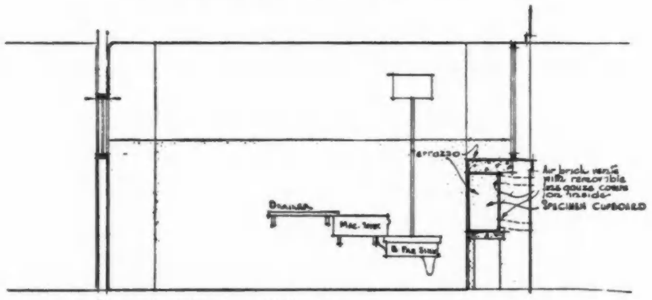
Each ward is sound-proofed and is provided with a fixed basin with hot and cold water, specially designed lockers that are easy of access without strain or unnecessary movement, and beds that are high enough to allow the occupant to see out of the windows, yet low enough for nursing efficiency. Every bed is provided with wireless. The temperature in each ward can be regulated according to the needs of the case. The floors are finished with teak blocks.

THE ROYAL MASONIC HOSPITAL:

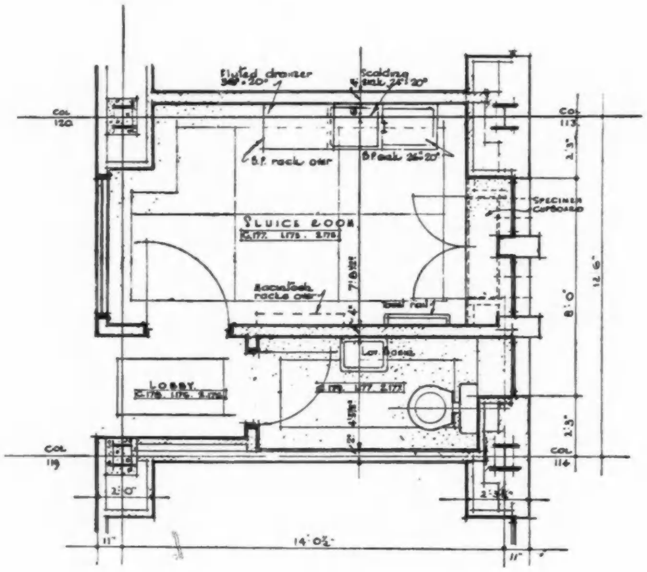

PIPE DUCT
COL 105
BROOM ROOM
SLOP SINK 18"x18"
24"x18" Lav Basin
Urinal
PATIENTS' LAVATORY
W.C.
Space for Trolleys
24"x18" Lav Basins
RADIATOR
SINK ROOM
Marble table top cupboards under
H.W. bottle rack calorifier over
5'6"x18" combined sinks
STERILIZERS
COL 108
Terrazzo cove carried up over bath
BATH
W.C.
BATHROOM
SLOP SINK 18"x18"
TOWEL RAIL
LAV BASIN
COL 109
14' 0½"
9' 6"
8' 0"
2' 5"
2' 3½"

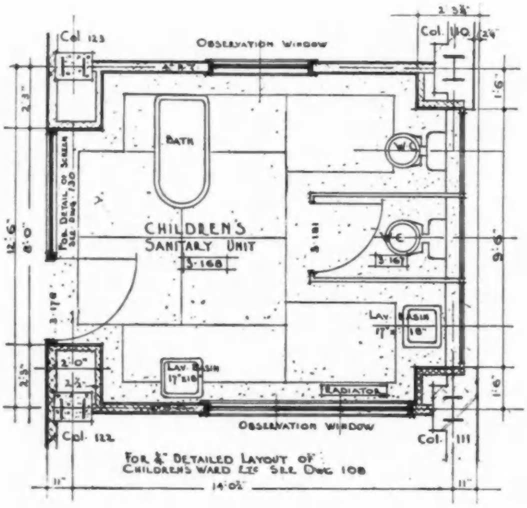

5
0
5
10
15
SPECIMEN CUPBOARD wood doors steel metal frame
SINK
TOWEL RAIL
BASIN

SLUICE ROOM & W.C.. EAST WALL


Terrazzo
Drainer
Mac. sink
B. Pan Sink
Air brick vents with removable gauze covers on inside
SPECIMEN CUPBOARD

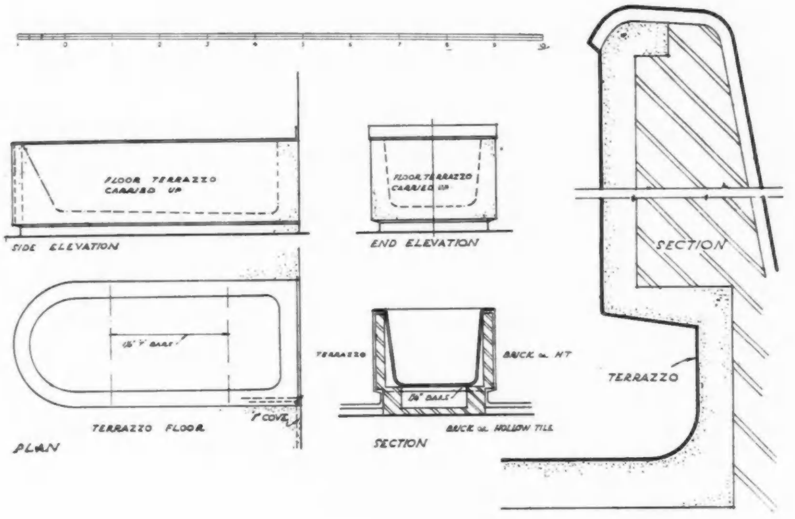
SLUICE ROOM NORTH WALL

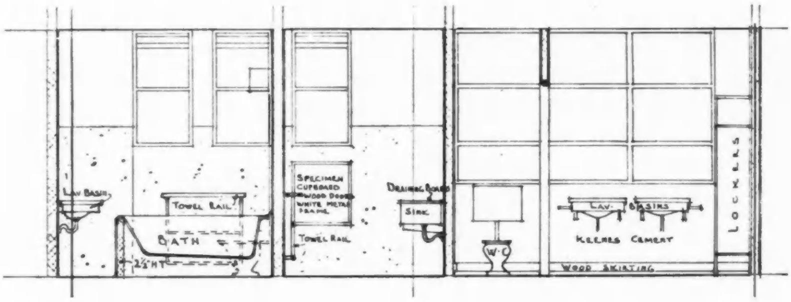

Fluted drainer
Scalding sink
COL 120
COL 113
B.P. rack over
B.Pan sink 26"x20"
SPECIMEN CUPBOARD
SLUICE ROOM
Mackintosh racks over
Towel rail
LOBBY
Lav. Basin
COL 119
COL 114
14' 0½"
12' 6"
8' 0"
2' 3"
2' 0"

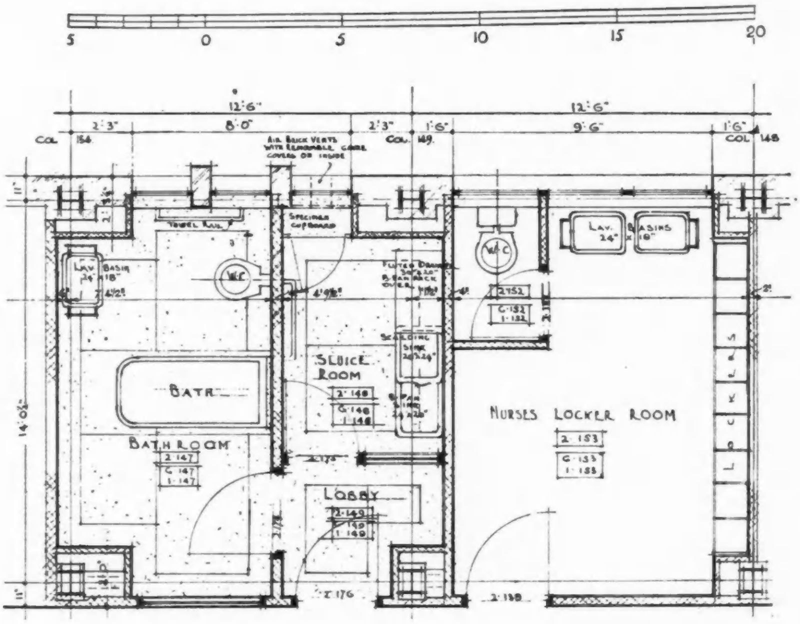

Col 123
OBSERVATION WINDOW
Col 130
BATH
W.C.
CHILDREN'S SANITARY UNIT
3.168
W.C.
LAV. BASIN 17"x18"
LAV BASIN 17"x18"
RADIATOR
OBSERVATION WINDOW
Col. 122
Col. 111
FOR DETAIL OF SCREEN SEE DWG 130
FOR ¼" DETAILED LAYOUT OF CHILDRENS WARD ETC SEE DWG 108
14' 0½"
12' 6"
8' 0"
9' 6"

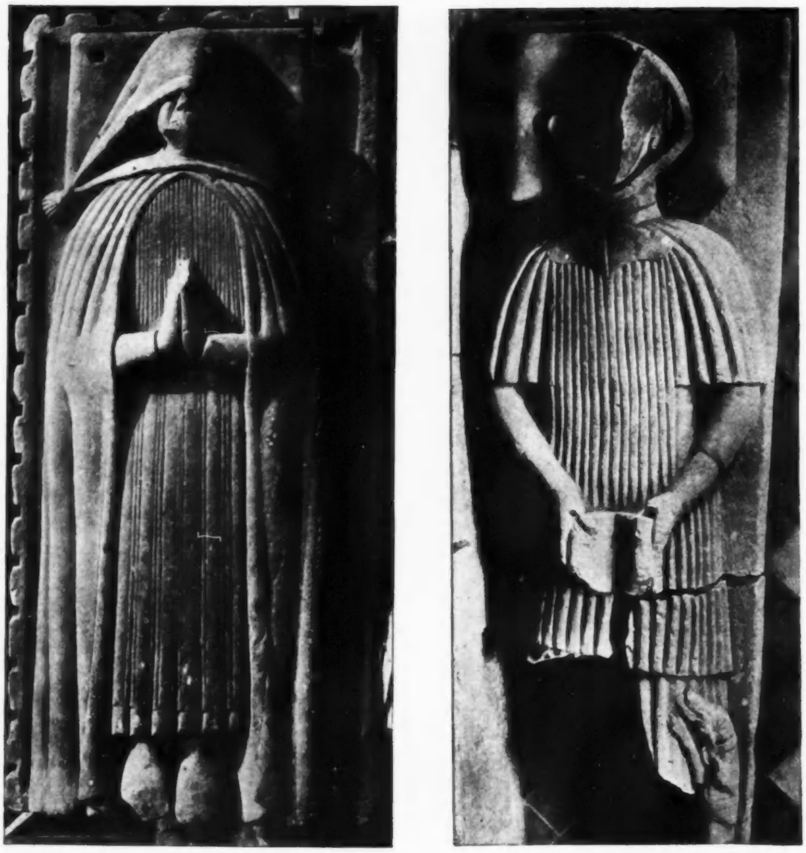
The drawings on this and the facing page show the lay-out of typical sanitary units that occur on all ward-floors ; a children's sanitary unit in connection with the children's wards on the third floor; and a detail of the construction of the standard bath, which is built-in and continuous with the floor and wall finish.

SANITARY UNITS


FLOOR TERRAZZO CARRIED UP
SIDE ELEVATION
FLOOR TERRAZZO CARRIED UP
END ELEVATION
SECTION
¾" BARS
TERRAZZO FLOOR
1" COVE
PLAN
TERRAZZO
BRICK or HT
¾" BARS
BRICK or HOLLOW TILE
SECTION
TERRAZZO


LAV BASIN
TOWEL RAIL
BATH
2½" HT
SPECIMEN CUPBOARD WOOD DOOR WHITE METAL FRAME
TOWEL RAIL
DRAINING BOARD
SINK
W·C
LAV. BASINS
KEENES CEMENT
WOOD SKIRTING
LOCKERS


5
0
5
10
15
20
12'·6"
12'·6"
2'·3"
8'·0"
2'·3"
1'·6"
9'·6"
1'·6"
COL 154
COL 149
COL 148
AIR BRICK VENTS WITH REMOVABLE CAST COVERS ON INSIDE
TOWEL RAIL
SPECIMEN CUPBOARD
LAV BASIN 24"×18"
W.C
4'9½"
FLUTED DRAINER 30"×20" & PAN RACK OVER
SCALDING SINK 24"×24"
B. PAN SINK 24"×20"
W.C
LAV. BASINS 24"×18"
BATH
BATHROOM
2·147
G·147
1·147
SLUICE ROOM
2·148
G·148
1·148
LOBBY
2·149
G·149
1·149
2·152
G·152
1·152
NURSES LOCKER ROOM
2·153
G·153
1·153
LOCKERS
14'·0½"
11"
2·176
2·175
2·138



The mediæval sculptor has achieved a convention at the same time expressive and sensitive in technique and related in scale and idiom to its architectural background. These examples are given not so much for the sake of the history lessons that the antiquary discovers in them, as for the lessons they offer to the present-day sculptor. The tradition seems to be one that modern sculpture, and particularly sculpture in concrete, should be allowed to follow. It has, besides the essential architectonic qualities, the formalized line and absence of undercutting that concrete demands.

Left: A prior from Hexham Priory, 1491. Right: Civilian from Gresford, Denbigh, c. 1350. Both are in freestone.

LITERATURE

THE FRUSTRATED SCHOOLMASTER

[By an American in England]

English Church Fittings, Furniture and Accessories. By T. Charles Cox, LL.D., F.S.A. London: B. T. Batsford, Ltd. Price 12s. 6d. net.

English Church Monuments, A.D. 1150-1550: An Introduction to the Study of Tombs and Effigies of the Mediæval Period. By Fred H. Crossley, F.S.A. London: B. T. Batsford, Ltd. Price 21s. net.

LET me say at once that these books, new editions of which have just been published, are accepted as standard works. They must, of course, be obtained and read by anyone even remotely interested in the subjects they deal with—let me say this at once in case the criticisms which follow seem ungenerous.

For to the modern reader the attitude of their authors—an attitude as "standardized" as the effigies of the late fifteenth century—begin already to seem—one cannot say out of date since historical research is said never to be out of date—but . . . well, let me quote Dr. Cox.

. . . " the remarkable feature about this effigy," says Dr. Cox of the splendid Keynes effigy in Durley Dale Church, " is that all the mail which is visible is of that rare kind called ' banded ' "

He goes on " As the century developed " . . . and then there is a learned discourse on *chausses*, and *cuisses*, the *plastron de fer* and the *coif de Mailles*.

Again " the best church in which to study " what?—" the *survival of the wearing of armour* from Elizabethan days right through the seventeenth century is that of " etcetera, etcetera.

Then Mr. Crossley takes up the refrain. The effigies and Memorials form an almost complete sequence of the costumes worn by the aristocracy, showing the evolution of defensive armour produced by the gradual development of new methods of warfare . . ." In no other research, we read, are we enabled to form so correct a judgment of our architecture at any given point of its course as in the memorial chapels and canopied tombs of England; and again, "when to the above are added the histories and tragedies of the families represented, we have a wealth of information at hand to enable us to visualize the life aspirations, religious conditions and artistic impulses of a people who enlivened one of the most interesting periods in the chronicles of England." Mr. Crossley sums up the attitude in one sentence. " The monuments also offer an unrivalled field for the study of heraldry and the art of the sculptor."

The study of heraldry *and the art of the sculptor*. There you have it.

I do not deny the importance of historical research. Antiquaries are as necessary as bio-chemists. To study " the life of the times "—some other times than these, of course—is both useful and entertaining.

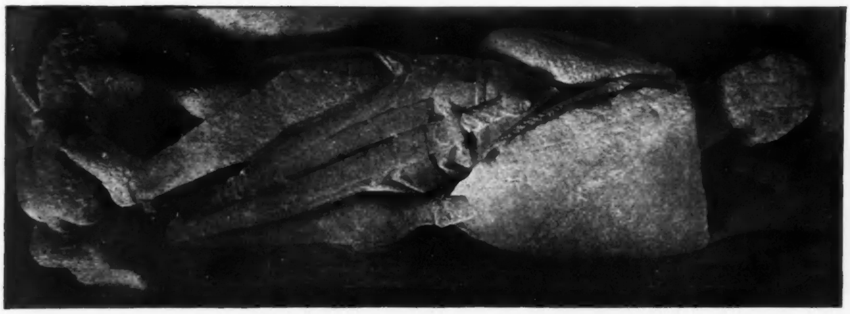
I admit all that. I go further. I applaud it. If I was a dictator I would heavily pay historians and antiquaries to continue their researches. Nr would I dare to suggest that the learned authors of these books refrain altogether from distributing a kindly " beautiful " or " fine " or even " work of art." For instance, Mr. Crossley says " When we review this marvellous art which lasted close upon four hundred years, we naturally wish." . . .

But what do we naturally wish?

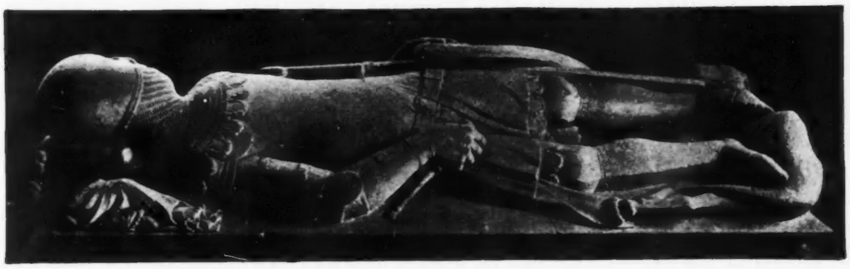
I naturally wish that we were producing an art as " marvellous " today. Were I a sculptor I should naturally wish to examine these monuments . . . but not with a view to collecting valuable historical data. I should naturally wish to examine them so that I might learn how to do as well, or better myself.

But does Mr. Crossley naturally wish any of these things? No. Nor, according to Mr. Crossley, do " WE." What WE naturally wish, according to Mr. Crossley, is " to know something of the sculptor-builders and artificers to whose genius we owe what has come down to us."

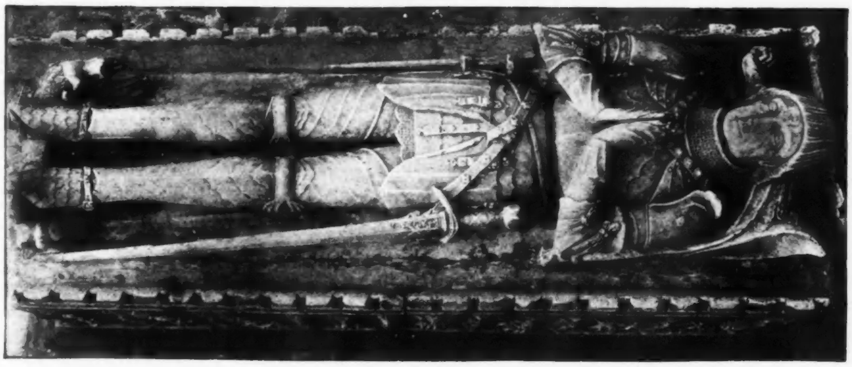
I admit that it is unfair to attack Mr. Crossley for not doing what he did not set out to do. He set out to record and tabulate and has done it, as the world knows, admirably. Further, his selection of illustrations, particularly in the effigies, has shown that he



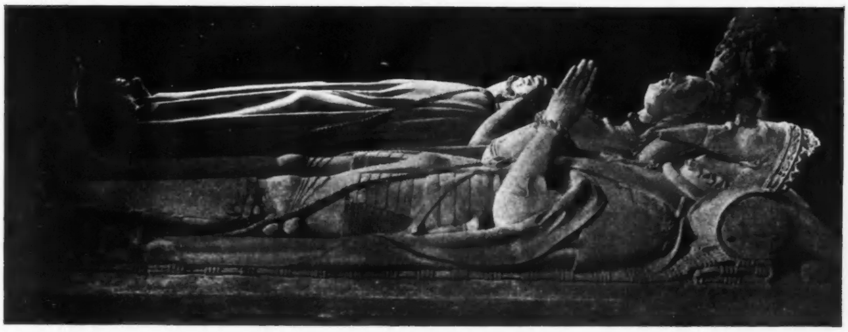
Sir Edward de Maley? from Bainton, Yorkshire; in freestone, c. 1314.



A Pembrugge from Clehonger, Hereford. c. 1320.



Sir Nicholas Fitzherbert from Norbury, Derbyshire; in alabaster, 1473.



Thomas Howard, third Duke of Norfolk, from Framlingham, Suffolk; 1554.

These four effigies from ENGLISH CHURCH MONUMENTS *exemplify not only the development of costume and heraldry, but also the whole attitude of the sculptor, as it changed from the restrained though expressive and more indirectly symbolic intention of the first two examples, executed in native freestone or Purbeck marble, to the alabaster elaboration of the last two—equally perfect in execution but with the chief pleasure taken in richness of detail on a stereotyped form.*

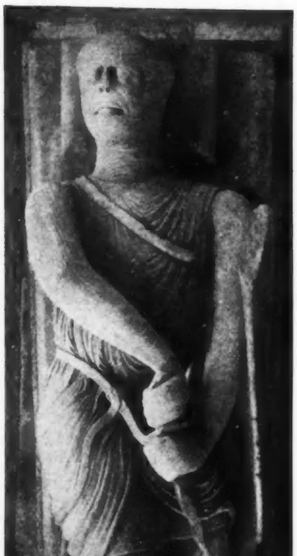
himself is moved by their beauty—which is all the more exasperating. It is the stereotyped outlook, the outlook of the writers, the readers, the world, the flesh, the devil, and all the heavenly choir, that forces one to attack these books—even when by comparison with others they ought to be praised. For what is the use of all the things that " have come down to us" if the first thing we naturally wish is to know something of the sculptor-builders and artificers to whose genius we owe them ? What is the use of these effigies if all they are described as showing is a ponderous *camail* or a new kind of *cuirass* formed of front and back plates ? What is the use these monuments if they offer " an unrivalled field for the study of heraldry (fortissimo) and the art of the sculptor " ? (pp.)

" But you must remember," I hear some drivelling maniac slobber, " the English are *not* an artistic nation." As an American citizen I don't care two brass farthings about the English. All I know is that I live in a part of the man-made English countryside simply because it is far far more beautiful than any other countryside I know. I ride on saddles that are works of art, and I walk in shoes that are models of fine craftsmanship. My house, which is eighteenth-century, is as expresssive as my car which is twentieth. The manners and mode of life of the people amongst whom I live have " good form " in the æsthetic sense in which I believe that phrase was meant to be used. Furthermore, I have recently visited again some of the effigies mentioned in Mr. Crossley's and Dr. Cox's books—hence this review.

It may be that the men who made the countryside—the barns, the fields the parks—were not English. For all I know the men who make saddles are Irish, and the men who make motor cars are Jews. The villagers may be Poles, the architects of the eighteenth century might have been Russians. But the sculptors of the effigies, according to Mr. Crossley, were English. And many of these effigies are in my far from humble opinion amongst the greatest works that sculpture can show.

Let us end this nonsense. The English may not be artists but they have produced works of art. Their countryside and mode of life is a work of art. If the present day English want to betray their countryside and mode of life, the more fools they. It may be that England is done for and the creative impulse is dried up. But don't let them fool themselves into thinking that their forefathers were as savage or as stupid as they.

Their forefathers did not sacrifice every beauty and decency for the sake of material gain—the kind of material gain which is found out fifty years afterwards to be a very material loss. They did not lock the works of *their* forefathers up in museums, nor did they regard them as useful for the study of heraldry and the discussion of the development of protective armour.



The effigies in the English churches cannot be said to have been entirely neglected, for the antiquaries have busied themselves, to a certain extent, about them. Yet, as sculpture, they have hardly been thought about at all. One of the reasons seems to be that the public does not accept as sculpture anything in a recumbent position. It will not take its sculpture lying down. For purposes of illustration, this photograph has been switched round so that the figure appears to be standing. Critics may thus be induced to study it seriously. It is one of the Dorchester effigies, and possibly the finest piece of English sculpture in existence.

In so far as they used them at all they used them for what they themselves, for their own creative purposes, got out of them. When they found they couldn't get anything out of them they scrapped them. I deplore their ruthlessness. Today most English people have a more enlightened attitude towards the past. But have they a more enlightened attitude towards the present ?

The answer is to be found in books. The English have no attitude toward the present. They collect, they tabulate, they research. They scratch about copying and collecting information about the superb monuments that lie around them in town and countryside. To the message of these monuments, the message that urges the men of the present to express themselves in a manner which is right and proper to their own epoch, as their forefathers expressed themselves before them—to this message they are deaf and blind.

I for one would rather see the great works of the past consigned to the flames in the manner of the wooden effigy of Radcliffe-on-Trent which, to celebrate a victory, the villagers stole from the church, dressed up as Bonaparte, and burnt at the stake, than see them preserved with spinster-like care for the delectation of the frustrated schoolmaster, who seems to have displaced the artist as the arbiter of civilization.

LAW REPORTS

BUILDERS SUE SUB-CONTRACTORS

Trollope and Colls, Ltd. v. *Rosser and Russell—King's Bench Division. Before Lord Chief Justice*

HIS lordship delivered his reserved judgment in the action by Trollope and Colls, Ltd., building contractors, of Coleman Street, E.C., against Rosser and Russell, heating engineers, of Queen Street, Hammersmith, to recover the sum of £567 paid for alleged negligence by the defendants who, as sub-contractors, installed a hot water heating system in premises erected by the plaintiffs in Old Jewry, E.C., for the Bank of Australia.

The defendants denied negligence, and alternatively pleaded contributory negligence on the part of plaintiffs' workmen.

The plaintiffs also relied upon an indemnity clause which ran as follows :—" The sub-contractor shall insure against all claims of whatever nature to be brought against him and shall indemnify the contractors against all such claims brought against the contractors in respect of injury or damage to any property or thing including property or things of the contractors caused by or existing out of the execution of the sub-contract work."

Plaintiffs' case was that they engaged the defendants to instal a heating system consisting of radiators throughout the bank premises, and in June, 1931, required them to remove a number of radiators temporarily to allow for the laying down of wooden floors in certain rooms. During the night of June 23, flooding occurred and damage was done to the wood flooring on several floors and plaster work, and the flooding spread to an adjoining building, the plaintiffs had been obliged to make the damage good. It was alleged that instead of fitting locked stopper cocks to the radiator pipes the defendants had fitted wheel valves. The former could not have been opened without a special spanner. Another allegation was that the defendants should not empty the main feed tank.

The defendants' reply was that the system was left emptied when their workmen left work for the day and that the valves were opened afterwards by plumbers employed by the plaintiffs without notice to the defendants.

Defendants also contended that it was an implied term of the contract that no claim could succeed under the indemnity when it arose through the negligence of the plaintiffs' men.

The plaintiffs' reply was that whoever caused the damage it arose out of the sub-contract, and that the plaintiffs' plumbers had nothing to do with the opening of the valves.

Mr. Samuel, K.C., and Mr. Platt Mills appeared for the plaintiffs, and Mr. Edgar Dale for the defendants.

His lordship, in the course of a considered judgment, said that in order to sustain a claim under the latter part of the indemnity clause it was necessary for the plaintiffs to prove that the injury or damage complained of was caused by or through the defendants' execution of the sub-contract work. There was, in his opinion, no satisfactory evidence of what was the cause of the damage or injury complained of. In these circumstances, he entered judgment for the defendants with costs.

ALLEGED BREACH OF COVENANTS TO REPAIR

Abell v. *Imperial Hotel, Exmouth (1916), Ltd.—Court of Appeal. Before Lords Justice Scrutton and Slesser and Mr. Justice Eve*

THIS was an appeal by Mr. G. J. Abell, of Exmouth, against a judgment of Sir Francis Newbolt, K.C., in favour of the Imperial Hotel, Exmouth (1916), Ltd., in an action brought against them by the plaintiff as the owner of the Imperial Hotel, Exmouth, to recover possession of the premises from the lessees, the defendants, on the ground that covenants to keep the premises in repair had not been complied with, and further that a repair notice had not been complied with. The appellant also sought damages.

Before the Official Referee, the company, whilst denying liability, said they had spent some £2,000 on repairs in the last five years, that they had settled a dilapidation action on the terms of doing the repairs and paying £70, and that the repairs now demanded were substantially the same as those asked for in the action, and that in these circumstances they should be relieved from forfeiture.

Sir Francis Newbolt held that the hotel was in good tenantable repair and that there was no damage to the reversion, and that the action was premature and vexatious with the view of getting the defendants to give up.

Mr. Croom Johnson, K.C., for the appellant, contended that there was no evidence on which the Official Referee could make the finding that there had been no breaches of covenant, seeing that an independent witness had said there were breaches of covenants. His client was entitled to have the covenants observed, and the only way he could enforce that right was to allege forfeiture and leave the defendants to apply for relief.

After hearing Mr. Cave, K.C., for the defendant company, the court held that there had been breaches of the covenants, and that the order of the court would be that on the defendants undertaking, by December 31 next, to remove the distemper and replace with paper and put the premises in good and tenantable repair in accordance with the lease to the satisfaction of an agreed surveyor, the judgment would be set aside, plaintiff would recover from the defendant 40s. damages, and defendants would be relieved from forfeiture. Defendants would have to pay the plaintiff's costs.

Lord Justice Scrutton, in giving judgment, said the Official Referee had arrived at a mistaken conclusion. There were specific covenants in the lease, and it was clear that in 1927 there had been considerable breaches of covenants by the lessees.

IN THAT CONTINGENCY

The following abstract is typical of a number of inquiries recently submitted to the Building Research Station. The information given in the reply is based on available knowledge. It has to be borne in mind that further scientific investigations may in the course of time indicate directions in which the reply might be supplemented or modified. Moreover, the reply relates to the specific subject of the inquiry, and is not necessarily suitable for general application to all similar problems.—Crown Copyright Reserved.

Heat Expansion of Concrete Roofs

¶ *THE following list of questions was submitted by a firm of contractors :—*

Cases have occurred in which concrete flat roofs have expanded in hot weather, causing cracks in the plaster cornices of partitions and walls below, and sometimes in the partitions and walls themselves.

In this connection :—

1 : Can you say what is the cause of the movements, and to what extent they are influenced by the type of surface finish used on the roofs? Is it possible to reduce the movements by means of a surface film of the nature of a paint or colour wash?

2 : Can you say whether such troubles are liable to occur with all types of concrete flat roof construction, whether of solid or hollow concrete, or hollow clay tile and concrete?

3 : Would you expect materially different results with steel frame construction from that in which the roofs rest on brick or stone walls?

4 : Do you consider that satisfactory results can be had by using expansion joints when no means of protecting the roof from the heat of the sun are provided?

5 : Would you summarize the known satisfactory methods of treating concrete roofs to prevent troublesome expansion in hot weather, mentioning which methods do and which do not help in reducing heat loss from inside in winter?

6 : Do you consider that on a flat roof a cement screed alone would be able to cause trouble (cracking of parapet walls for example) by expansion in a horizontal plane in hot weather?

Numerous failures of this kind have been reported to the Building Research Station. A long, unbroken expanse of roof naturally tends to be the most troublesome, and damage seems to be the more disastrous where the roof slab is carried on solid brickwork. In several cases it has been observed that the brickwork at the ends of long spans of roof has been displaced by the thermal expansion of the roof slab, and that serious cracks have been formed which extend right through the walls. Such defects are very difficult to remedy, and there is every likelihood that winter rains will penetrate through the cracks.

Even where the external walls are not visibly injured, relative movement between the roof slab and internal partitions very frequently results in cracks at, or close to the ceiling level, and persistent damage to plaster coves and cornices. Instances have been reported where repeated attempts to repair such defects have failed as, in fact, would be expected when the cause of the trouble is considered.

Taking the questions in order :—

1 : The movements are undoubtedly due to the fact that flat concrete roofs are usually covered with asphalt or other bituminous materials which absorb a high proportion of the heat available in the sun's rays. Part of the absorbed heat is lost by the warmed surface to its cooler external surroundings and part passes downwards into the main body of the roof, thereby causing expansion.

In this respect untreated bituminous products must be ranked among the least desirable of roofing materials, for not only is their power of absorption of the sun's heat very high—usually about 90 per cent. of the incident heat is absorbed—but they also transmit heat readily. Even heavy gritting of the outer surface, a finish usually applied on asphalt roofs and frequently also on felted roofs, does not in general reduce the heat absorbing power of the surface below 80 per cent. Temperatures as high as 120 F. are frequently attained beneath gritted asphalt.

Of alternative roofing materials it is only necessary to mention metallic coverings such as sheet lead or copper. At first sight these might be expected to remain cooler than bituminous materials, since their absorbing powers are somewhat lower. This difference is, however, only appreciable as long as the metallic coverings are new and untarnished, and even then any advantage which might accrue from the smaller absorption is almost entirely offset by the fact that a bright metallic surface is unable to lose heat so readily to its external surroundings as is a non-metallic one. The exceedingly low thermal resistance of metals also tends to increase the transmission of heat to the main roofing structure.

2 : There seems no reason to suppose that any of the normal types of concrete roof construction would be immune from troubles of this kind ; in fact, the cases investigated by the Building Research Station include a great variety of methods of construction of which the following may be mentioned :—Solid reinforced concrete slabs, hollow tiles and concrete, filler joists and concrete, hollow concrete.

Provided there is a continuous layer of

concrete over the roof—and this is essential with every type of construction referred to above—it is evident that troubles due to expansion may be expected with roofs of large extent unless some precautions are taken to reduce the temperature rise or to accommodate the movements.

3 : The steel-framed building, so far as can be judged from the limited number of cases investigated, does not behave in the same manner as the building in which the roof is carried on brickwork or masonry. It appears that serious cracking of external brick panels in a steel-framed building is a rare event. It is not possible to assign a definite reason for this, but the most probable explanation is that the stresses due to thermal expansion of the roof are distributed uniformly throughout the length of the building and consequently there is no large concentration of stress at any particular region.

In most of the steel-framed buildings investigated the damage has taken the form of cracking at the junction of internal partitions and the roof system. This is, indeed, to be expected as the partitions are supported on a floor which is maintained at a relatively uniform temperature, whereas, during sunny weather, the roof system is subjected to very rapid changes in temperature. It has been suggested that trouble of this kind could be reduced, if not entirely avoided, by keeping the partitions clear of the roof system and using a cove mould or cornice capable of being deformed to accommodate any differential movement. A firm of wallpaper manufacturers has produced a thick paper cove for the purpose, and this seems quite a practical solution of the problem.

4 : A well-designed system of expansion joints, even where no insulation is provided, should eliminate troubles due to thermal movements. It should be noted, however, that the joints would have to be numerous and would present a very considerable complication in roof design if they were to be made a sound, water-tight job. They would also involve serious additional expense. A case has been reported where the provision of expansion joints in a long, asphalt-covered, reinforced concrete deck, has effectively prevented any injury to the supporting structure.

5 : Practical methods for treating concrete roofs covered with waterproofing layers can be divided into three main classes :—(*a*) : those in which an additional film or layer of a suitable material is placed on top of the ordinary waterproofing layer to screen it from the sun's rays ; (*b*) those depending on the cooling produced by evaporation from a sheet of water ; and (*c*) those in which an insulating layer is interposed between the surfacing material and the concrete.

In class (*a*) the most obvious method of treatment is to apply a light coloured film of high reflectivity and low absorbing power to the outer surface of the roof. On bituminous roofs, however, serious practical difficulties are encountered. Oil-bound pigments cannot be used on account of the softening action of the oil on the bitumen, while the shrinkage of any adherent coating, such as a cement wash, almost invariably causes crazing. Probably the safest material to use is ordinary limewash, with a little tallow added as a binder. An absorbing power as low as 20 per cent. can readily be obtained in this way and, by this means alone, it is possible to reduce the maximum temperature likely to be reached by the concrete by 30 F. The material needs renewal, however, at least once or twice each summer.

White treatments should be quite satisfactory on metal roofs.

In addition to the above method involving surface films three other screening methods have been tried with success. The first consists simply of a layer of gravel, usually about 2 ins. thick, laid on top of the asphalt and held clear of the gutters by a suitable arrangement of grids. This method is effective and relatively inexpensive, provided that the additional loading of the roof is taken into account when the building is designed. It should also tend to increase the life of the asphalt, as indeed do all the methods of this class, by screening the bituminous surface from the sun's rays. The only serious disadvantage arises where roofs are to be used for traffic.

Another method, particularly suitable for use with felted roofs, is typified by two recently developed roofing systems. In one, clinker concrete tiles, 1 in. thick and faced with asbestos cement, are stuck on top of the felt with bitumen. In the other a 1 in. thickness of porous mortar is laid on the felt and divided into rectangular slabs by means of raked joints, which are subsequently filled with an elastic bitumen compound. Both these systems provide a hard-wearing surface of reasonably low absorbing power and good appearance.

Finally, a method of screening has recently been devised for use with asphalt roofs, in which reinforced concrete slabs, perforated and set up on short legs to permit free air movement beneath them, are laid on the asphalt surface. The upper surfaces of the slabs are normally finished with a light-coloured cement wash.

As regards efficiency, there is not much to choose between the various treatments grouped in class (*a*). The materials used for the added layers have usually somewhat higher absorbing powers than a whitewashed surface, but at the same time present an additional resistance to the inward flow of heat. A coat of whitewash applied on top of one of the slab treatments would, of course, increase its efficiency to some extent, but it is doubtful whether the small gain would be worth the trouble involved. From the point of view of maintenance, the gravel and slab treatments have the advantage that they provide reasonable protection for a roof over an indefinite period without the necessity for extensive repair or renewal. Some slight reduction of the outward flow of heat in winter also results from these additions.

The treatment referred to under heading (*b*) is fairly common on roofs of Lancashire mills and consists of a layer of water, usually between 2 and 4 ins. deep, which is allowed

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OUR SECRETARIES

• 8 •

H. B. S. GIBBS

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS

MR. H. B. S. GIBBS received his architectural education at the Department of Architecture, University of Sheffield, where he obtained the Diploma in Architecture. He passed the R.I.B.A. final in 1914 with distinction in Thesis.

He served during the war in the Royal Field Artillery, and since his return from the war in 1919, he has been engaged in general practice in Sheffield in partnership with Mr. E. M. Gibbs.

He succeeded to the secretaryship of the Sheffield, South Yorkshire and District Society of Architects and Surveyors in 1922.

Mr. Gibbs is actively interested in the work of the Council for the Preservation of Rural England, being a member of the local executive Council and of the Peak District Advisory Panel. He has also written a book on the life and work of James Gibbs.

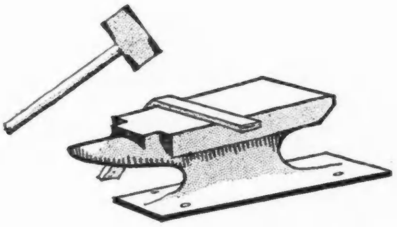
to stand on top of the asphalt. Cooling by evaporation minimizes any heating effect of the sun on the water, while the large heat capacity of the water is a further safeguard against extremes of temperature. In a few instances where large quantities of water are needed for industrial processes, storage tanks have been incorporated in flat roofs with excellent results. Unfortunately, accurate data as to the efficiency of this method are not available.

Although it has been claimed that this method obviates the necessity of laying a roof to drainage falls, it should be remembered that any defect developing in the roof will necessitate immediate drainage of the superincumbent water. Regular drainage is also necessary for cleaning purposes.

In class (*c*) the only materials which have been extensively used are insulating board and diatomaceous-earth blocks, both in conjunction with asphalt roofs. Where insulating board is used, the asphalt may be laid either directly on the boards or on a cement screeding. The diatomaceous-earth blocks are usually laid on the concrete and the joints grouted with bitumen to accommodate thermal movements. The asphalt is then applied with or without a screeding, as described. Both these materials add appreciably to the insulating power of the roof in winter. The method is not likely, however, to be as effective as those of class (*a*) in keeping down the temperature of the concrete in summer, unless uneconomic thicknesses of insulation are used.

6 : A building has actually been investigated where the expansion of a cement screed laid over diatomaceous-earth blocks had displaced parapet walls. The damp-proof course in the parapet just below the level of the screed provided a plane on which slip took place easily. Had this not been the case it seems quite possible that the thin cement mortar screeding might well have buckled ; this, of course, would have resulted in injury to the asphalt covering.

It will be appreciated that the problem is a very complicated one and can probably be dealt with in various ways. Taking all things into consideration, however, it seems quite evident that the first aim should be to prevent the excessive temperature rise in the dark asphalt, either by applying a material presenting a light, reflective surface, or by sheltering the asphalt from direct sunshine. The provision of thermal insulation below the asphalt would assist in reducing the temperature rise in the concrete structure, and have the advantage of reducing the heat loss through the roof in winter. Since, however, it is known that a disproportionate amount of insulation is required to obtain the same benefit as is to be derived by providing a reflective external surface, thermal insulation should be used as an accessory to some form of external surface treatment. Whatever method of treatment be adopted, the seasonal variations of temperature in any roof must be considerable, and it is evident that long spans should be broken by suitably designed expansion joints at intervals not greater than, say, 100 ft. Here again, the expansion joints, unless very closely spaced, should only be regarded as an accessory to some form of surface treatment designed to prevent excessive temperature rise due to absorption of solar radiation.



TRADE NOTES

[*BY F. R. S. YORKE, A. R. I. B. A.*]

Synthetic Resin in Paint

THE general improvements that have followed the employment of synthetic resin in the manufacture of paint give reasonable grounds for the belief that a complete revolution is taking place in the decorating trade, comparable to that which occurred in the coach-painting world when nitrocellulose products displaced oil materials for automobile finishes a few years ago.

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In order to understand where synthetic paints differ from other paints and enamels, it is necessary to consider the main ingredients of a pigmented product, i.e :—

1. The pigment.
2. The binder.
3. The volatile solvent.

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The essence of manufactured paint is, relatively speaking, the binder ; an examination of decayed paint shows one of two forms of death or decay :—1, heavy chalking. 2, cracking or flaking. In either case the solid part, or pigment, has lost grip because the binder has perished.

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For centuries it has been customary to manufacture this binder, in the case of varnish films or gloss paints and enamels, from linseed oil, to which has been added a resin, thickened by heat. There are a variety of natural resins, but that most favoured has been the fossil copal type. This is somewhat similar to Everton toffee in appearance and brittleness.

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Within the last ten years, certain synthetic resins have been used in place of the fossil copal for the manufacture of binders for gloss paints and enamels. These synthetic resins have been prepared from almost identical materials to those from which the fossil resin is composed, and, in consequence, the synthetic product resembles in appearance and properties the fossilized material, which has matured naturally over a long period of years. A further and most important point of comparison is that the synthetic and fossil resins are *equally brittle*, and, in order to make a vehicle or binder for paint, both have to be cooked up with a drying oil such as linseed or tung oil.

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In a more recently developed type of paint the binder is prepared by a special process from raw materials which are comparatively simple in chemical constitution and are obtainable in a high degree of purity. From these substances is obtained, under strict conditions of chemical control, a synthetic liquid binder. This binder, though not apparently different from the binders obtained from fossil resins, has at no time during its manufacture passed through the brittle stage, which characterizes both the fossil, and certain of the so-called synthetic resin binders, and is, in addition, free from variations in quality due to lack of uniformity, sometimes found in the natural resins that have been used in paint manufacture. The film obtained by the use of this special binder has an unusual durability and freedom from cracking and flaking.

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It has been found by manufacturers carrying out tests for the purpose of determining durability—the most important quality of a paint—that the outstanding faults of the material are liability to crack, peel, chalk, and fade.

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Certain manufacturers, accepting the fact that it is not possible to make a paint that will last for ever, have had to decide whether their product should fail by cracking or by chalking.

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A little consideration will show that cracking is an undesirable end for a paint film, since water must percolate through the cracks, and, once behind the film, not only accelerate the complete failure of the film by destroying the key, but also expose the surface that is ostensibly protected by the paint to the ravages of the elements. Moreover, at the time of repainting, stripping and re-priming will be essential to a satisfactory foundation for the new coat.

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It appears that chalking is the lesser evil, since in this case the whole of the painted surface is protected evenly, there being no break in the paint film and, provided the work of repainting is undertaken at reasonable intervals, the simple operation of washing over the decaying film is the only preparation necessary prior to the application of the new coat.

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It should be understood that in comparing failure by cracking with failure by chalking, in these notes, it is the failure of the binding or liquid component of the paint, not the failure of the pigment, that is meant. Some pigments are susceptible to heavy chalking decay when used under certain atmospheric conditions. But the chalking of the class of pigment used by reputable manufacturers with synthetic binders is almost imperceptible in ordinary examination.

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Whilst on the subject of paint failure, I should make some mention of fading. This is due, sometimes, to a change in the colour of the pigment, but such cases are, I am told, comparatively rare. The general cause is the perishing of the binder or vehicle, and the accuracy of this statement may be tested by brushing over a faded green or signal red film with linseed oil or varnish, when the application of more binder will automatically restore the original colour. The old type of binder often weathered too quickly, but it is claimed that the new synthetic resin type is the most durable binder yet produced.

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The claims made for paint finishes based on synthetic resin binders may be summarized thus :—

Avoidance of cracking in the eventual death of the film.

Increase in durability over the old types of paint by 50 per cent. to 100 per cent.

Intense hardness of film without loss of flexibility.

Increased retention of gloss.

Rapid hardening without consequent interference with normal working and flowing properties.

A greater degree of resistance to brine, salt air, fumes and gases than was common to the old types of paint.

Elimination of special undercoating. The nature of the binder is such that a perfect key obtains for repeated coats of finish, and the manufacturer's specification requires two coats finish where normally one undercoating and one finish would be necessary.

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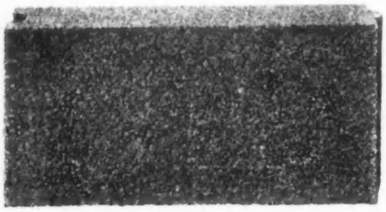
Any ordinary painter can obtain the results in appearance and durability available in the material, provided he observes the simple precautions that apply in every painting job, i.e., the first coat should be very thin and thoroughly brushed out, and ample hardening time—24 hours—should be allowed before the finishing coat is applied.

Pumice Concrete Blocks

Having read the remarks concerning pumice concrete in the article "Weight Saving in Frame Buildings," that appeared in THE ARCHITECTS' JOURNAL for July 13, I wrote to the manufacturers of Eonit asking for an ideal specification for plaster to be applied on Eonit pumice blocks.



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I am told that any reliable plaster may be used with safety. For two-coat work ¼ in. to ⅜ in. is a sufficient thickness, and one-coat work can be carried out satisfactorily.

Literature Received

Rubber in Modern Building	*The Rubber Growers' Association.*
Patent Screw Fans	*Sirocco Ltd*
Mural Service and Distribution System	*Henley's Telegraph Works*

Other Trade Items

Messrs. Edward Marshall, Ltd., have started business as builder's merchants and sanitary specialists at 3-4, University Street, Tottenham Court Road, London, W.C.1 (Museum 2607), with warehouses in Mortimer Street, at the rear of the premises. The directors are Mr. H. M. Cohen, formerly with Messrs. Rownson, Drew and Clydesdale, Ltd., and Mr. K. J. M. Worley.

*

Mr. R. W. Vawdrey, B.A., A.M.INST.C.E., Chief Engineer of the Indented Bar and Concrete Engineering Co., Ltd., has just returned from fulfilling an interesting commission in Egypt. He was appointed by the Egyptian Government as a member of an international commission of three European engineers to investigate and report on certain trouble which occurred in connection with the foundations of a very large building in Cairo, the new Mixed Law Courts. The building was constructed two or three years ago on concrete piles of the "cast in place" type, and serious settlement had taken place.

*

W. T. Henley's Telegraph Works Co., Ltd., of Holborn Viaduct, E.C.1, have just marketed a new plastic compound, which is claimed to be useful for a variety of purposes, particularly for electrical installation work when necessary to protect parts susceptible to the deleterious influence of moisture or fumes. The compound is fully described in a leaflet obtainable from the firm at the address given above.

*

Messrs. Allom Brothers, lighting specialists, have moved their offices from 15, George Street, Hanover Square, W.1, to 16, Grosvenor Place, S.W.1. Advantage will be taken of the larger accommodation now available to display some interesting forms of decorative lighting.

Obituary

We regret to record the death, which occurred on July 29, of Mr. William Thornley, L.R.I.B.A., who had been in practice in Wigan for nearly forty years.

Born in Bolton in 1876, Mr. Thornley was educated at the Bolton Church Institute, later being articled to Messrs. Bradshaw Gass and Hope. In 1897, together with his brother, the late Mr. J. B. Thornley, he set up in practice in Wigan.

During his career Mr. Thornley had designed numerous public and private buildings, including a number of cinemas. His last important work was the Plaza Cinema at Stockport, which has just been completed.

Specifications for Timber

The great variety and numerous applications of timber and the general ignorance of the characteristics of the material itself has, in the past, rendered wellnigh impossible any attempt at standardization of its terms, definitions, grades or its multitudinous nomenclature.

Recently, however, the interest in the matter has become particularly intense owing to the drastic need for economy which has made industry look to new methods of retrenchment of expenditure and the benefits of standardization were well to the fore in the search.

In addition, differences in nomenclature up and down the country had led to many misunderstandings and annoyances.

Out of the discussions which took place at the Ottawa Conference has come the request to the British Standards Institution to prepare a comprehensive British Standard Specification to cover timbers generally coming into the country.

The first portion of this work—a Standard Glossary of terms and definitions for Softwoods—is now ready in draft form for comment and copies of this draft under reference C.D.(B) 786 may be obtained, price 1s. 2d. post free, from the Publications Department, British Standards Institution, 28, Victoria Street, London, S.W.1.

Anyone sufficiently interested is invited to send in comments, which will be carefully considered by the Committee. These comments should reach the Director not later than October 31, 1933.

The Buildings Illustrated

The names of the specialists and general and sub-contractors for the Royal Masonic Hospital, Ravenscourt Park, were given on page 156 of last week's issue.

A Cottage in Norfolk (page 169). General contractors, Francis Bros. Sub-contractors : Crittall Manufacturing Co Ltd., steel casements ; Hollis Bros. and Co., Ltd., wood block floors ; H. W. Dutton & Co., Ltd., hot water ; City Iron Co., sanitary goods ; Gordon Russell, oak latches ; Farman Bros., thatchers.

Housing Progress in Scotland

The following figures show the progress that has been made in State-aided housing schemes in Scotland to June 30, 1933 :—

	Completed.	Under construction
1919 Act, by local authorities	25,129	—
,, (by private utility societies) ..	421	—
Private subsidy Schemes, 1919 (Additional Powers) Act	2,324	—
1923 Act, by local authorities	4,015	—
,, by private enterprise	26,260	2,805
,, by public utility societies ..	80	—
1924 Act, by local authorities	64,756	7,631
,, by private enterprise	4,529	3,303
,, by public utility societies ..	143	—
Slum Clearance—		
(1) 1923 Act, by local authorities	15,765	952
(2) 1930 Act, by local authorities	6,869	7,947
Not yet allocated between 1924 and 1930 Acts ..	—	166
1931 Act, by local authorities..	16	342
1933 Act, by local authorities..	—	—
Demonstration houses ..	17	—
Steel houses erected on behalf of Government by Scottish National Housing Company	2,551	—
	152,875	23,146

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

Plans passed by the CATERHAM U.D.C.: Nine houses, Alexandra Road, for Mr. M. C. Wright; shop, 81 Croydon Road, for Mr. G. Risby; two bungalows, Sunny Rise, for Mr. W. Butler; three houses, Milton Road, for Mr. J. A. Hole; six houses, Whyteleafe Road, for Mr. C. H. Harrington; alterations, cottage hospital, for Mr. R. P. Nyren; two houses, Hamsey Green, for Messrs. Westwood and Riddle; 25 houses, Farleigh Road, for Mr. A. C. Guest.

The L.C.C. is to erect seven five-story blocks of dwellings on the EAST DULWICH estate, at a cost of £131,000.

Plans passed by the ILFORD Corporation: 14 shops and houses, Eastern Avenue, for Messrs. Holland Bros.; 148 houses, Langman Drive, etc., for Mr. G. F. Seigerts; six bungalows, Donnington Avenue, for Mr. J. Aldridge; four houses, Ardwell Avenue, for Messrs. Cockett, Henderson and Gillow; two houses, Ross Gardens, for Mr. W. Butcher; 24 houses, Eton Road, for Mr. R. Cooper; two bungalows, Bella Gardens, for Mr. J. Giles; extensions, depository, 255, High Road, for Mr. J. T. Perrin; eight bungalows, Southwood Gardens, for Mr. G. H. B. Gould; engine house, Uphall Works, Uphall Road, for Messrs. Howards and Sons, Ltd.; four houses, Brian Road, for Mr. R. McFarland; four houses, Trenance Gardens, for Mr. J. W. Moore; 32 houses, Mortlake Road, for Messrs. E. Glenny and Son; alterations, 117-9, High Road, for Messrs. Hammond and Miles, Ltd.; 74 houses, Bergolt Avenue, etc., for Mr. P. G. Ashton; three shops and 24 houses, Cantley Drive, etc., for Mr. J. Aldridge; eight houses, Chadwell Heath Lane, for Mr. A. W. Heppell; six houses, Emmott Avenue, for Mr. W. Wakeling; alterations, Methodist Church, Oaks Lane, for Mr. P. R. Fincher; additions, 9 to 37, Lime Grove, for Mr. C. Fryatt; two houses, Wards Road, for Mr. H. G. Needham; eight houses, Grove Road, etc., for Mr. F. Stimpson. Plans submitted: dairy premises, Hainault Road, for Messrs. Hilliard and Spen; 86 houses, Ardwell Avenue, for Messrs. Goodchild & Co.; 24 houses, Headley Drive, for Mr. J. Aldridge; mission hall, Roding Lane, for Mr. H. E. S. Borton.

The ISLINGTON B.C. has prepared a scheme for improvements at the Caledonian Road Baths.

The L.C.C. is to erect a new out-patients' department at the MILE END hospital, at a cost of £7,821.

Plans passed at PURLEY: Two houses, Famet Avenue, for Messrs. E. T. Brown and Son; additions, Purley Men's Club, Whytecliffe Road, for Mr. E. J. Hatten; two houses, Coombe Wood Hill, for Mr. W. A. Hawthorn; two shops, Banstead Road, for Messrs. Best & Co.; additions, Reedham Orphanage, for Mr. E. F. Duncanson; works office, rear Caterham Motor Co., Brighton Road, for Messrs. J. A. Smith and Son.

The St. Pancras House Improvement Society, Ltd. is to erect further dwellings, comprising 70 rooms, on the Litcham Street area, ST. PANCRAS.

The City of London Corporation proposes to appoint Mr. Victor Wilkins, F.R.I.B.A., as architect for the scheme for the erection of a flower market at SPITALFIELDS, at an estimated cost of £65,610.

SOUTHERN COUNTIES

Plans passed by the BEXHILL Corporation: Offices, etc., London Road, for Messrs. D. L. and A. E. Lewis; two bungalows, Barnhorn Road, for Mr. A. J. Coomber; alterations, 11 London Road, for Messrs. Jewhurst Bros. and Thompson, Ltd.; two houses, Cambridge Road, for Mr. R. W. Moore; eight houses Church Hill Avenue, for Mr. E. Bunce; three houses, Walton Park, for Messrs. Tubbs and Messer; three houses, Meads Road, and layout land in Fairmount Road, for Mr. J. E. Maynard.

The BRIGHTON Corporation is to deal with the clearance of the Nelson Row and Nelson Place areas, and is considering the provision of rehousing on the site for 88 flats, estimated to cost £50,500.

The BRIGHTON Corporation has arranged to erect offices for Messrs. Braybons, Ltd., on the Princes Place, North Street site, at a cost of £30,000.

Plans passed by the BRIGHTON Corporation: 83 houses, Ladies Mile estate, Patcham, for Ladies Mile Estate, Ltd.; 12 houses, Bevendean estate, for Messrs. W. A. Gates and Sons, Ltd.; public house, Whitehawk Road, for Kemp Town Brewery Co., Ltd.; 12 houses, Wick estate, Rottingdean, for Mr. T. Addison; alterations, 82 Queen's Road, for Britannia Assurance Co., Ltd.; alterations, Woodfield Lodge, Wakefield Road, for Chichester Diocesan Training College; extensions, 9, London Road, for Messrs. Timothy Whites, Ltd.; alterations, Millers Arms, Windmill Street, for Templin and Son's Brewery, Ltd.; alterations and additions, 104-7 Queen's Road, for National Institute for the Blind; 32 houses, Carden Avenue estate, Patcham, and flats, Bevendean estate, Falmer, for Messrs. Braybons, Ltd.; two shops, Warren Road, Rottingdean, for Mr. W. King.

SOUTH-WESTERN COUNTIES

Plans passed by the PLYMOUTH Corporation: Revised plan, for development of Pounds estate, for Messrs. D. Ward and Son; 11 garages, Inverdene, for Mr. J. Hender; ten houses, Ridge Park Avenue, for Mrs. Baskerville; four houses, Ash Gardens, for Mr. A. Rapson; two houses, Cranmere Road, for Messrs. J. Davy and Son; two houses, Vapron Road, for Mr. F. H. Crocker; reconstruction, St. Peters School, Wyndham Street, for Church of England managers; alterations and additions, 18 George Street, for Messrs. Boots, Ltd.; annexe to kitchen, Westminster Hotel, The Crescent, for Mr. A. E. Cockerton; alterations and additions, 80-1, Old Town Street, for Messrs. W. Mumford, Ltd.; alterations, and additions, Warleigh Avenue, for Plymouth Co-operative Society, Ltd.; alterations, Royal Hotel, Devonport, for Mr. F. Harrison, extensions, South Devon and East Cornwall Hospital, for governors; sub-station, Portland Road, for Corporation electricity department; four houses, Cemetery Road, for Mr. G. Holmes; two houses, Brean Down Road, for Mr. A. Manning; shop and houses, and three houses, Wolseley Road, for Mr. A. J. Shields.

MIDLAND COUNTIES

The BIRMINGHAM Corporation has leased sites for the erection of houses to Mr. Joseph Cohen, at King's Road, for 14 houses; to Mr. Douglas James, at Gibbins Lane, for three houses; to Messrs. P. R. Garner & Co., Handsworth, for seven houses.

The BIRMINGHAM Corporation is to adapt and extend the Marston Green Homes, to form a mental colony, at a cost of £85,205.

The BIRMINGHAM Education Committee is to proceed with the erection of an elementary school, in Audley Road, Yardley, at a cost of £12,844.

The BIRMINGHAM Education Committee proposes to proceed with the scheme for the erection of a new central technical college. It is estimated that the cost of the erection of the first instalment will be £400,000.

Plans passed by the DUDLEY Corporation: Extension, Claughton Road, for Purity Bottling Stores; 20 houses, Buffery Estate, for Messrs. Poole Bros.; two houses, Bunns Lane Fields, Burnt Tree, for Mr. David Webb; four houses, Chestnut Avenue, for Messrs. Speake & Co.; six houses, Priory Road, for Messrs. Brookes Bros.; five houses, St. James's Road, for Mr. H. Smart; two houses, Dudley Wood Road, for Messrs. T. Smith and Son; two houses, Dudley Wood Road, for Mr. J. A. Smith.

Plans passed by the MANSFIELD Corporation: 48 houses, Eakring Road and Oak Tree Lane, for Mr. R. Lane; additions, Victoria Street, for the trustees of T. W. Cash, factory (Portland Mills); additions to school and house, Woodhouse and Chesterfield Roads, for Queen Elizabeth's Grammar School; additions to bakery, Oxford Street, for Mr. S. Lander; two houses, Southwell Road, for Mr. C. C. Stafford; conveniences, Pleasley Hill Cemetery, for Mansfield Burial Board; three streets, off Eakring Road and Oak Tree Lane, for Mr. R. Lane; church and school, Big Barn Lane, for the trustees of the Methodist Church; two houses, Southwell Road, for Mr. G. Brown; three houses, Black Scotch Lane, for Mr. T. Tack.

Plans passed by the WARRINGTON Corporation: Loading stage, etc., Liverpool Road, for Messrs. J. Crosfield and Sons; new schools, Bewsey Road, for the trustees of St. Alban's R. C. School; two houses, Long Lane, for Messrs. R. and S. Smith; extension to foundry, Dallam Lane, for Shyman's Foundry Co., Ltd.; alterations, 10 and 12 Reynolds Street, for Atlas Building and Construction Co., Ltd.; re-modelling depot, Crosfield Street, for Shell-Mex and B.P., Ltd.

The WARRINGTON Corporation Housing Committee is to proceed with the erection of 106 houses at Bewsey, for re-housing purposes.

NORTHERN COUNTIES

Plans passed at BARROW-IN-FURNESS Corporation: 12 houses and two shops, Provincial Street, for Mr. C. G. B. Ellison; four houses, Yarlside Road, for Mr. W. H. Paul; 14 houses, Roose Road, for Messrs. R. T. Dockeray & Co., Ltd.; six houses, Roose Road, for Messrs. J. Walker and Sons.

Plans passed by the BOLTON Corporation: Four houses, Thorncliffe Road, for Messrs. F. and H. Douglas; 10 houses, Almond Street, for Mr. W. E. Yates; 44 houses, Thornydykes Estate, Blackburn Road, for Messrs. E. and S. Street, Ltd.; conversion of house into shop, 421, Chorley Old Road, for Mr. G. Hutchinson; 24 houses, Melbourne Road, for Mr. J. R. Bushell; two houses, Wigan Road, for Miss E. Bleakley; alterations to premises, Market Street, for Messrs. Schofields, Ltd.; four houses, Harpers Lane, for Messrs. Yates and Partington; lay-out and streets, Great Marld Estate, for Messrs. Wm. Townson and Sons; eight houses, Walker Avenue, for Mr. H. Gorse; conversion of workshop into house, 11, Mosley Street, for Messrs. A. Warburton and Son; conversion of house into five flats, "Brookfield," Chorley New Road, for Mr. William Gornall; alterations to premises, 80, Blackburn Road, for Britannic Assurance Co., Ltd.; 18 houses, Montserrat, Chorley Old Road, for Messrs. A. T. Reynolds & Co.; eight houses, Halliwell Hall Estate, for Messrs. Leigh Bros.; two houses, Albert Road, for Mr. A. S. Woods; 52 houses, Great Marld Estate, for Messrs. W. Townson and Sons.

The Lancashire Education Committee has obtained sanction to borrow £21,400, for the proposed senior school at HUYTON.

The TODMORDEN Corporation has approved plans for the erection of 54 houses on the Ashenhurst housing estate.

Plans passed by the YORK Corporation: Two houses, Hempland Lane, for Mr. H. C. De Burgh; alterations, 10-11, Feasegate, for Mr. C. Hart; additions, 25, St. Andrewgate, for Mr. E. W. Jones; eight houses, Burton Grange estate, for Mr. A. Temple; eight houses, Heworth Green, for Mr. H. Williamson; additions, 9-10, Brunswick, for Dean and Chapter; five houses, Moorgarth Avenue, for Messrs. R. J. Pulleyn and Sons; two houses, St. Olaves Road, for Messrs. H. Colman and Sons; additions, 55, Layerthorpe, for Messrs. Belt Bros.; 18 houses, Westwood Terrace, for Mr. E. Relton; additions, Nurses' home, Heslington Road, for Friends' Retreat Committee; additions, White Swan Hotel, Pavement, for Mr. C. Walker; block of flats, Tadcaster Road, for Weldon Estates Co.; library extension, Museum Street, for Corporation Library Committee.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	**ABERDARE**	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	**BANBURY**	S. Counties	1 3	11½
B_1	Bangor	N.W. Counties	1 3	11½
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11½
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11½
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5	1 0¾
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton	N.W. Counties	1 5	1 0¾
A_2	**CAMBRIDGE**	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A	Cumberland	N.W. Counties	1 4	1 0
A	**DARLINGTON**	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	**EASTBOURNE**	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11½
A_3	**FELIXSTOWE**	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	**GATESHEAD**	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11½
A	**HALIFAX**	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	**ILKLEY**	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	**JARROW**	N.E. Coast	1 5½	1 1¼
A	**KEIGHLEY**	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	**LANCASTER**	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	**MACCLESFIELD**	N.W. Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11½
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	**NANTWICH**	N.W. Counties	1 4½	1 0½
A	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	**OAKHAM**	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	**PAISLEY**	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	**QUEENSFERRY**	N.W. Counties	1 5½	1 1¼
A_2	**READING**	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	**ST. ALBANS**	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	**TAMWORTH**	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1 1¼
A	Tyne District	N. E. Coast	1 5½	1 1¼
A	**WAKEFIELD**	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11½
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	**YARMOUTH**	E. Counties	1 3	11½
B_1	Yeovil	S.W. Counties	1 3	11½
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	"		1	7
Joiner	"		1	7
Machinist	"		1	8
Mason (Banker)	"		1	7
" (Fixer)	"		1	8
Plumber	"		1	7
Painter	"		1	6
Paperhanger	"		1	6
Glazier	"		1	7
Slater	"		1	7
Scaffolder	"		1	3
Timberman	"		1	3
Navvy	"		1	2½
General Labourer	"		1	2½
Lorryman	"		1	5
Crane Driver	"		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	"	1	16	6
Hydrated Lime	"	3	0	9
Portland Cement	"	2	6	0
Rapid Hardening Cement	"	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	"		7	6
Building Sand	"		7	9
Washed Sand	"		8	9
2" Broken Brick	"		8	3
¾" " "	"		11	6
Pan Breeze	"		6	6
Coke Breeze	"		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	"	3	6	5	3
Rest bends	"	4	3	6	3
Single junctions	"	3	6	5	3
Double "	"	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	"	4	6	6	6
Channel tapers	"	2	9	4	0
Yard gullies	"	6	9	8	9
Interceptors	"	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	"	9	0	15	0
Single junctions	"	8	9	18	0
Double junctions	"	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	"		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	"	3	0	0
Phorpres bricks	"	2	18	0
Stocks, 1st quality	"	4	11	0
" 2nd "	"	4	2	6
Blue Bricks, Pressed	"	9	2	6
" Wirecuts	"	8	2	6
" Brindles	"	7	6	6
" Bullnose	"	9	14	0
Red Sand-faced Facings	"	6	18	6
Red Rubbers for Arches	"	12	0	0
Multicoloured Facings	"	8	8	0
Luton Facings	"	8	0	0
Phorpres White Facings	"	3	17	3
Phorpres Rustic Facings	"	3	12	3
Midhurst White Facings	"	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	"	21	10	0
Headers	"	21	0	0
Bullnose	"	28	0	0
Double Stretchers	"	30	0	0
Double Headers	"	27	0	0
Glazed Second Quality, *Less*	"	1	0	0
" Buffs and Creams, *Add*	"	2	0	0
" Other Colours	"	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" " " "	"		1	10
3" " " "	"		2	1
4" " " "	"		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
" " Basebed	"	4	9
Bath stone	"	2	11
York stone	"	6	6
" " Sawn templates	"	7	6
" " Paving, 2"	F.S.	1	8
" " " 3"	"	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	"	24	10	0
20" × 10" Countesses	"	19	5	0
18" × 10" Viscountesses	"	15	10	0
18" × 9" Ladies	"	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	26	0	0
" green	" "	27	15	0
Best machine roofing tiles	"	4	10	0
Best hand-made do.	"	5	0	0
Hips and valleys	each			9½
" hand-made	"			10
Nails, compo	lb.		1	4
" copper	"		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	" "			5
" " 2nds	" "			4
Mahogany, Honduras	" "		1	3
" African	" "		1	1
" Cuban	" "		2	6
Oak, plain American	" "		1	0
" Figured "	" "		1	3
" Plain Japanese	" "		1	2
" Figured "	" "		1	5
" Austrian wainscot	" "		1	6
" English	" "		1	11
Pine, Yellow	" "		1	0
" Oregon	" "			4
" British Columbian	" "			4
Teak, Moulmein	" "		1	3
" Burma	" "		1	2
Walnut, American	" "		2	3
" French	" "		2	3
Whitewood, American	" "		1	1
Deal floorings, ¾"	Sq.		19	0
" ⅞"	"	1	1	6
" 1"	"	1	3	6
" 1¼"	"	1	7	6
" 1½"	"	1	12	0
Deal matchings ⅝"	"		14	0
" ¾"	"		15	6
" 1"	"	1	4	0
Rough boarding ¾"	"		16	0
" 1"	"		18	0
" 1½"	"	1	6	0

Plywood, per ft. sup.

Thickness	$\frac{3}{16}$"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		⅜"	½"	1"	1¼"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
" 3"-11½" long	"	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	"	11	1/3	2/2	2/10	5/3
" " 3"-11½" long	"	8	10	1/5	1/11	3/6
Bends	"	8	11	1/7½	2/7½	5/2
Springs not socketed	"	5	7	1/1½	1/11½	3/11
Socket unions	"	2/-	3/-	5/6	6/9	10/-
Elbows, square	"	10	1/1	1/6	2/2	4/3
Tees	"	1/-	1/3	1/10	2/6	5/1
Crosses	"	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	"	3	4	6	8	1/3
Diminished sockets	"	4	6	9	1/-	2/-
Flanges	"	9	1/-	1/4	1/9	2/9
Caps	"	3½	5	8	1/-	2/-
Backnuts	"	2	3	5	6	1/1
Iron main cocks	"	1/6	2/3	4/2	5/4	11/6
" " with brass plugs	"	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	" water	47½
Steam	57½	" steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	" water	42½
Steam	47½	" steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	"	8	6
" " ⅜"	"	8	3
" " ½"	"	8	0
" " ¾"	"	7	6
" " ⅞"	"	7	6
" " 1"	"	7	6
" " 1¼"	"	7	6
" " 1½"	"	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	"	5	0	8	6
Boots	"	3	3	4	5
Bends	"	2	9	4	0
" with access door	"	—		6	9
Heads	"	4	0	5	0
Swan-necks up to 9" offsets	"	4	0	6	3
Plinth bends, 4½" to 6"	"	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	"	1	7	1	11
Obtuse angles	"	2	0	2	6
Outlets	"	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	2	0
" drawn pipes	"		19	0
" soil pipe	"	1	6	0
" scrap	"		14	6
Solder, plumbers'	lb.			10
" fine do.	"		1	0
Copper, sheet	"			10½
" tubes	"			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	"	1	1	1	3	2	8
Galvanized	"	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	"	3	9	5	3	10	3
Shoes	"	2	10	4	4	9	6
Heads	"	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	"	2	10	0
" fine	"	4	15	0
Hydrated lime	"	3	0	9
Sirapite	"	3	6	0
Keene's cement	"	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
" rent	"		3	9
Lath nails	lb.			3½

GLAZIER

		s. d.	s. d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.		2½
" " 26 oz. " " "	"		3½
Arctic glass, white	"		7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	"		6½
¼" Hartley's rough rolled	"		7
¼" " wired cast	"		10
¼" Georgian wired cast	"		11
¼" Polished plate, n/e 1 ft.	"	†7½ to	‡1 0
" " 2	"	†10 "	‡1 3½
" " 3	"	†1 4½ "	‡1 10
" " 4	"	†1 11 "	‡2 4
" " 6	"	†2 3 "	‡2 7½
" " 8	"	†2 5 "	‡3 0½
" " 12	"	†2 10 "	‡3 3½
" " 20	"	†3 3½ "	‡3 9
" " 45	"	†3 6½ "	‡4 0½
" " 65	"	†3 11½ "	‡4 4
" " 90	"	†4 4 "	‡4 9
" " 100	"	†4 6 "	‡4 11
Vita glass, sheet, n/e 1 ft.	"		1 0
" " " " 2	"		1 3
" " " over 2	"		1 9
" " plate, n/e 1 ft.	"		1 6
" " " 2	"		3 0
" " " 5	"		4 0
" " " 7	"		5 0
" " " 15	"		6 0
" " " over 15	"		7 6
Putty, linseed oil	lb.		3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	1
Boiled oil	"		2	3
Turpentine	"		4	9
Patent knotting	"		14	0
Distemper, washable	cwt.	3	0	0
" ordinary	"	2	5	0
Whitening	"		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	"		14	0
Outside varnish	"		16	0
White enamel	"	1	15	0
Ready-mixed paint	"		13	6
Brunswick black	"		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

			£	s.	d.
Digging over surface n/e 12" deep and cart away		Y.S.		2	9
„ to reduce levels n/e 5' 0" deep and cart away		Y.C.		8	6
„ to form basement n/e 5' 0" deep and cart away		„		9	0
„ „ 10' 0" deep and cart away		„		9	6
„ „ 15' 0" deep and cart away		„		10	0
If in stiff clay	add	„		2	6
If in underpinning	„	„		4	0
Digging, return, fill and ram	„	„		4	0
Planking and strutting to sides of excavation		F.S.		1	0
„ „ to pier holes		„			5
„ „ to trenches		„			5
„ „ extra, only if left in		„			3
Hardcore, filled in and rammed		Y.C.		10	0
Portland cement concrete in foundations (6-1)		„	1	6	0
„ „ „ (4-2-1)		„	1	12	6
„ „ „ underpinning		„	1	16	0
Finishing surface of concrete, spade face		Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and gratings	„	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
„ „ in cement	„	29	15	0
„ Stocks in cement	„	35	15	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			5½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	„	6	9
¾" paving or flat	„	4	0
1" paving or flat	„	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	„	3	7	0
Do., 24" × 12"	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles	„	2	16	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" „ „ „ „	„	1	17	6
1¼" „ „ „ „	„	2	3	0
¾" × 2" fir battening for Countess slating	„		9	6
Do. for 4" gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" „ „ „ „ „	„		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	„	2	12	6
1½" do.	„	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1¼" do.	„		1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" „ „	„	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	3	9
2" „ „ „	„	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" „ „ „	„	2	8
1½" „ but moulded both sides	„	2	4
2" „ „ „	„	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" „ „	„	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½" deal moulded wall strings	„	2	1
1½" „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" „ „	„	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	16	6
Do. in flashings		1	19	0
Do. in covering to turrets, etc.	„	2	6	0
Do. in soakers	„	1	12	0
Labour to welted edge	F.R.			3½
Open copper nailing	„			3½
Close „ „	„			4½

		½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1½" s.	1½" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks	F.R.	1	0	1	2	1	5	2	1	3	0	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	3
Do. to stop ends	„		6½		8		9		11	1	3	—	
Boiler screws and unions	„	3	3	3	9	5	0	8	0	—		—	
Lead traps	„	—		—		—		6	3	8	9	—	
Screw down bib valves	„	6	9	9	6	11	0	—		—		—	
Do. stop cocks	„	9	0	11	0	14	6	20	6	47	0	—	

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	9
Do. vertical	„		2	3
Rough render on walls	„		1	4
Render, float and set in lime and hair	„		2	0
Render and set in Sirapite	„		2	2
Render, backing in cement and sand, and set in Keene's cement	„		3	1
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1" girth	„			1½
1" granolithic pavings	Y.S.		3	6
1½" „	„		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	„		17	6
9" × 3" „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

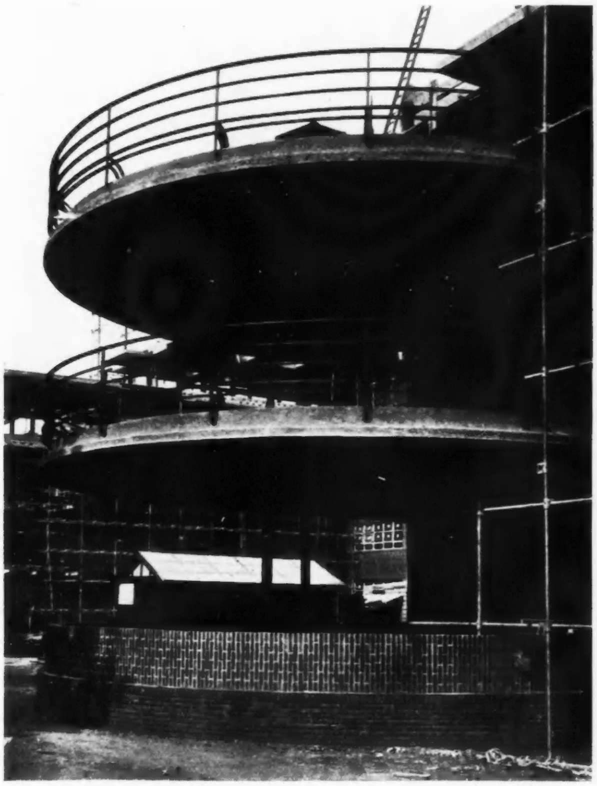
PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	„	2	9

Supplement to THE ARCHITECTS' JOURNAL for August 10, 1933

THE ROYAL MASONIC HOSPITAL

DESIGNED BY SIR JOHN BURNET, TAIT AND LORNE

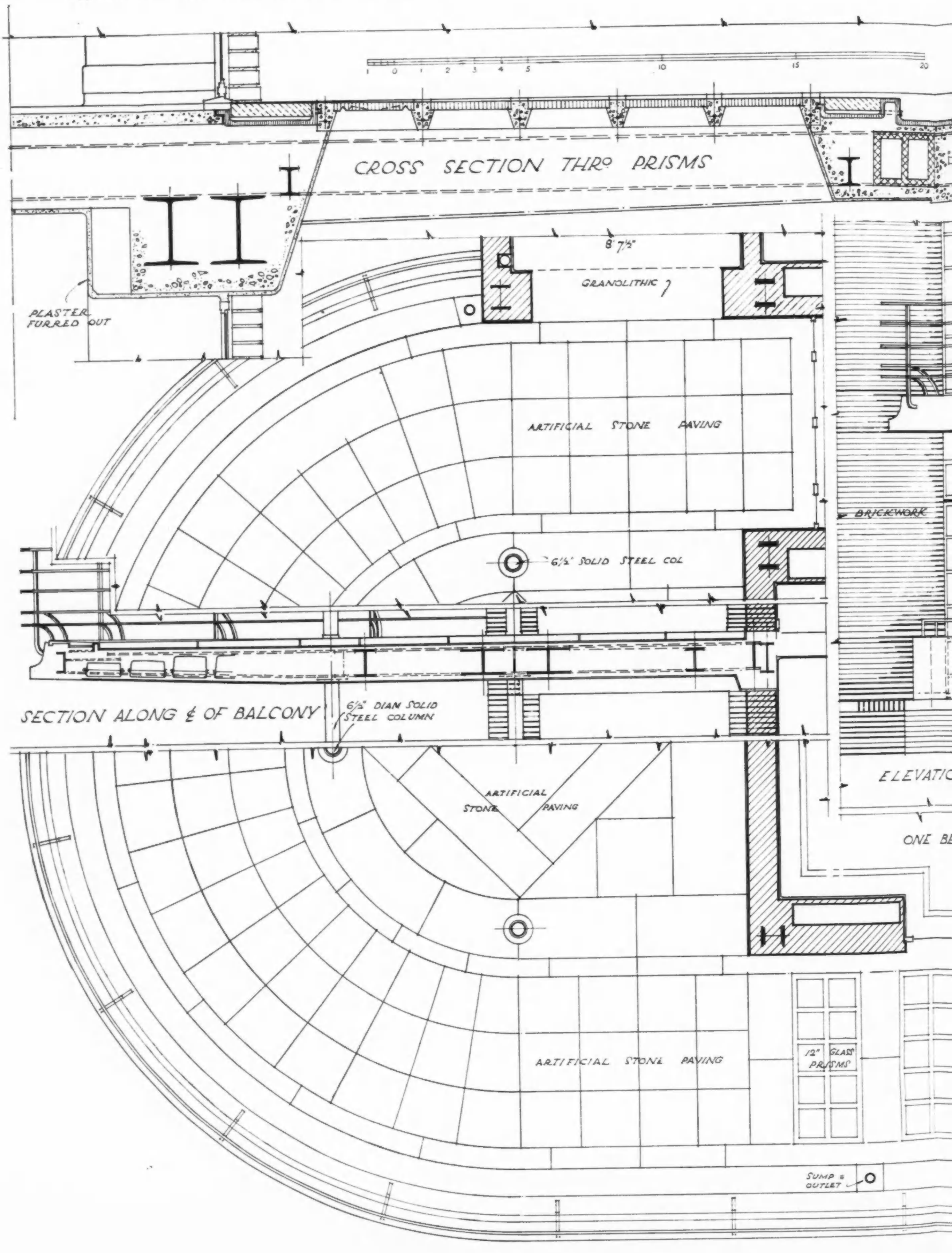


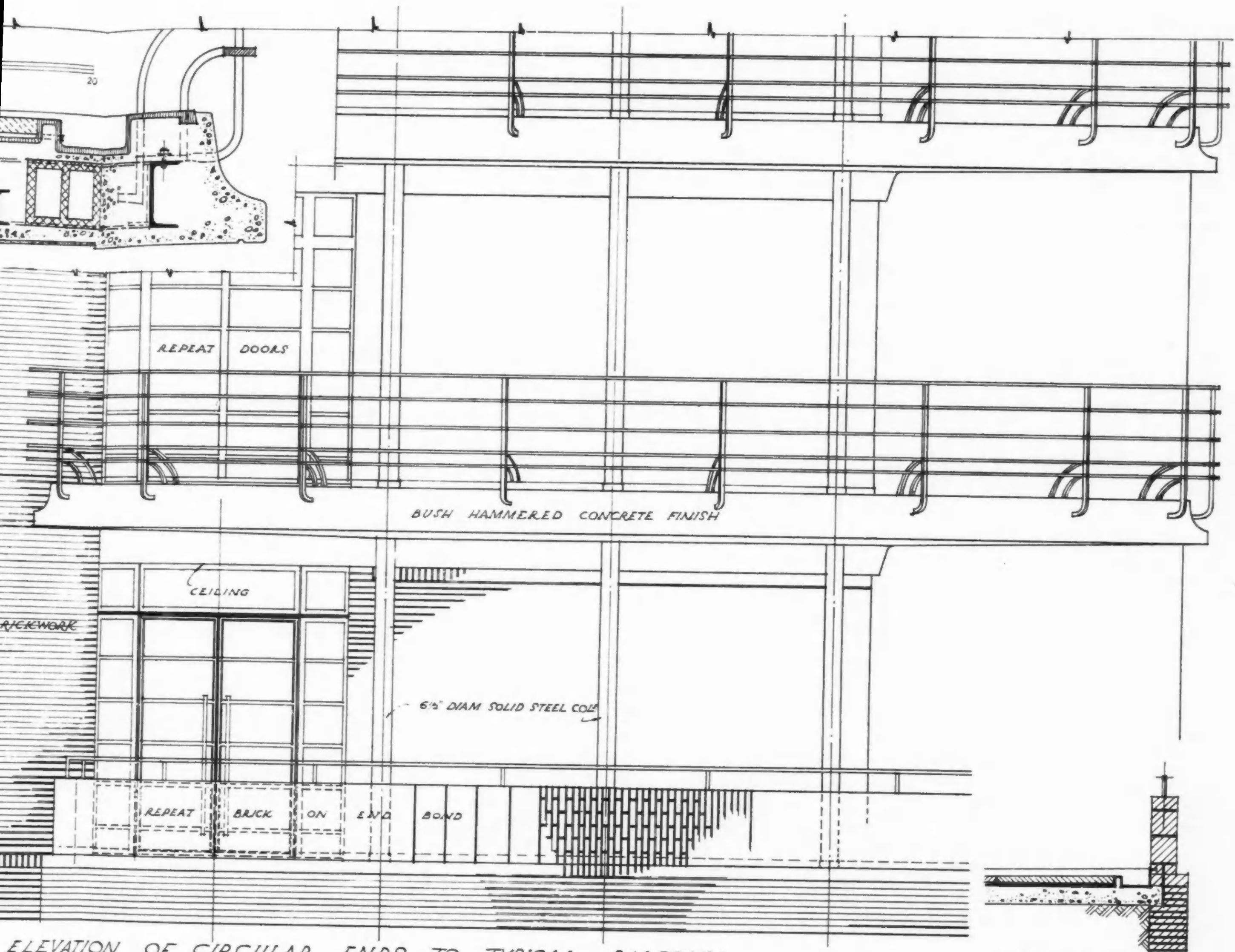
THIS week's supplement shows the construction of the cantilevered sun balconies in the Royal Masonic Hospital at Ravenscourt Park. The balconies form the southern extremity of each wing of the Ward Block, which is illustrated in the body of this issue.

They are entirely constructed in electrically welded steelwork; the balcony slab, or filling between the steel, being of hollow steel tubing with a reinforced-concrete casing. The edges of the balconies are in solid reinforced concrete with an exposed aggregate finish. The columns are of solid steel encased in green terrazzo.

The welding system of construction used in these balconies was necessitated by the shallowness and lightness demanded by their position. The balconies being 30 ft. in diameter, no rolled balconies of sufficient strength were available, and it would have been impossible to rivet up suitable plated beams. Welded steelwork for structural purposes in buildings is not yet recognized by the London Building Act, but, since the hospital was carried out under the Section of the Building Act for Public Buildings, permission was here obtainable.

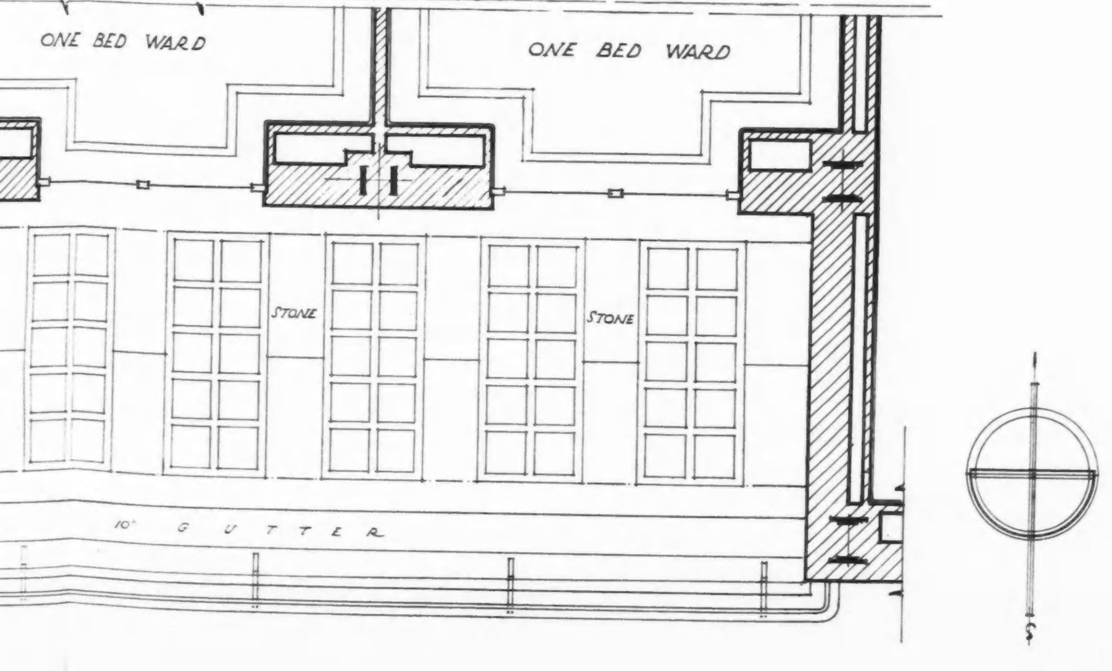
The photograph above shows the balconies after the structural work had been completed. The finished balconies are given on page 173 of this issue.

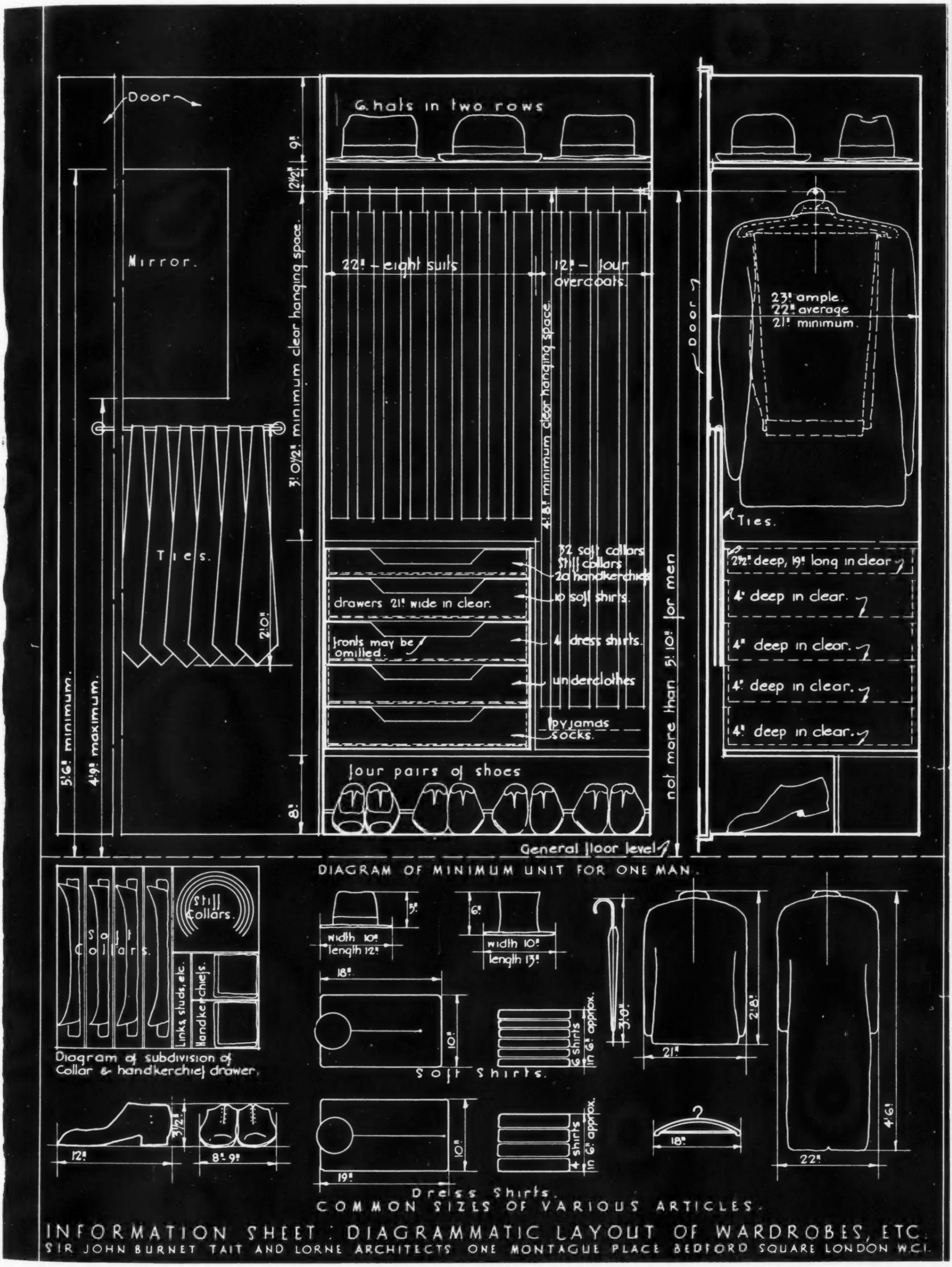

1 0 1 2 3 4 5 10 15 20
CROSS SECTION THRo PRISMS
8' 7½"
GRANOLITHIC
PLASTER FURRED OUT
ARTIFICIAL STONE PAVING
BRICKWORK
6½" SOLID STEEL COL
SECTION ALONG ℄ OF BALCONY
6½" DIAN SOLID STEEL COLUMN
ELEVATIC
ARTIFICIAL STONE PAVING
ONE BE
ARTIFICIAL STONE PAVING
12" GLASS PRISMS
SUMP & OUTLET


20
REPEAT DOORS
BUSH HAMMERED CONCRETE FINISH
CEILING
RICKWORK
6½" DIAM SOLID STEEL COLs
REPEAT BRICK ON END BOND

ELEVATION OF CIRCULAR ENDS TO TYPICAL BALCONY

SECTION THRo BRICK BALUSTRADE


ONE BED WARD
ONE BED WARD
STONE
STONE
10" GUTTER


Door
Mirror.
Ties.
2'0"
5'6" minimum.
4'9" maximum.
6 hats in two rows
9"
1'2½"
3'0½" minimum clear hanging space.
8"
22" – eight suits
12" – four overcoats.
4'8" minimum clear hanging space.
32 soft collars
Stiff collars
2a handkerchiefs
10 soft shirts.
drawers 21" wide in clear.
fronts may be omitted.
4 dress shirts.
underclothes
pyjamas
socks.
four pairs of shoes
not more than 5'10" for men
General floor level
Door
23" ample.
22" average
21" minimum.
Ties.
2½" deep, 19" long in clear
4" deep in clear.
4" deep in clear.
4" deep in clear.
4" deep in clear.
DIAGRAM OF MINIMUM UNIT FOR ONE MAN.
Soft Collars.
Stiff Collars.
Links studs, etc.
Handkerchiefs.
Diagram of subdivision of Collar & handkerchief drawer.
5"
width 10"
length 12"
6"
width 10"
length 13"
18"
10"
6 shirts in 6" approx.
Soft Shirts.
3'0"
21"
2'8"
12"
3½"
8"-9"
19"
10"
4 shirts in 6" approx.
Dress Shirts.
18"
22"
4'6"
COMMON SIZES OF VARIOUS ARTICLES.

INFORMATION SHEET : DIAGRAMMATIC LAYOUT OF WARDROBES, ETC.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS • 29 • LAY-OUT OF WARDROBES

INFORMATION SHEETS

• 29 •

LAY-OUT OF WARDROBES: 1

•

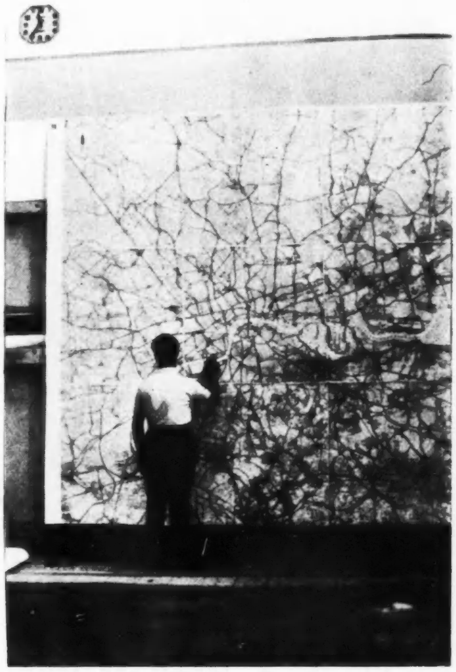
OF the set of five Information Sheets now in progress, devoted to furniture, this, the third, is one of a pair illustrating the lay-out of wardrobes, etc.; its fellow will be published next week.

The following is a full list of the subjects previously issued :—

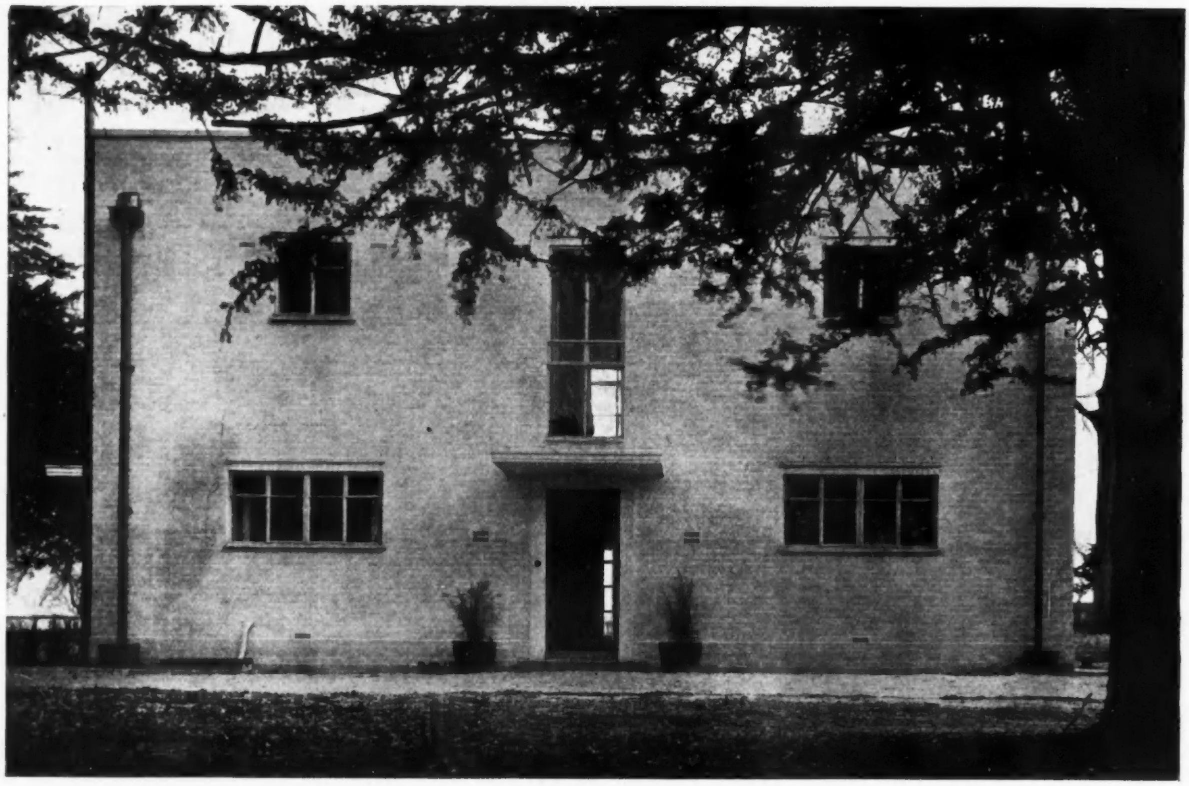
1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units: 1.
13. Apr. 12—Lavatory Units: 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs : 1.
23. June 29—Concrete Stairs : 2.
24. July 6—Pressed Steel Stairs : 1
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs : 2
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.

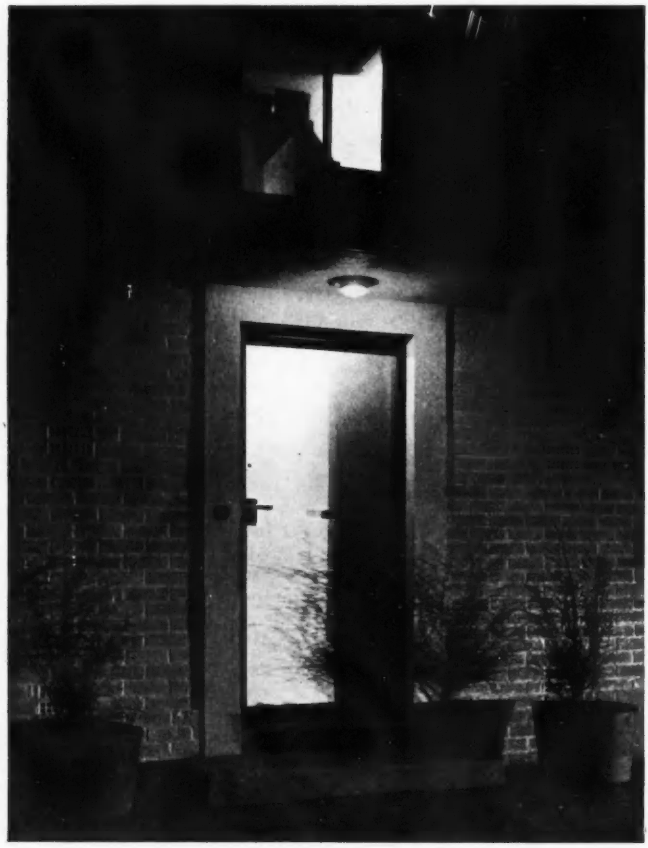
THE MARS GROUP

AN ANALYSIS OF LONDON



THIS map of London, prepared by the MARS group, was one of the contributions of the English delegation to the fourth congress of the International Congresses for Modern Architecture, held on board the s.s. "Patris II," while cruising in the Mediterranean and visiting Athens and the Greek Islands. It is a circulation analysis map showing the nature and density of traffic occurring on all the London road and transport systems. Similar maps of Paris and Berlin were presented by the French and German delegates. The figure standing in front of the map is M. Sert, leader of the Spanish delegation. On their arrival in Athens several banquets were held to welcome the delegates, who were also present at the official inauguration of the exposition: "La Ville Functionelle," in the gardens of L'Ecole Polytechnique, and the Acropolis was floodlighted in their honour. The congress concludes today.





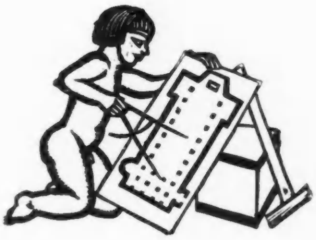
A HOUSE IN SURREY

DESIGNED BY FREDERICK ETCHELLS

"The Yews," Ridgeway, near Leatherhead, Surrey, is a small house in cream-washed brick.

The two illustrations show the north entrance front and a detail of the front door taken at night. The hood is of reinforced concrete, and the surround is cement-rendered. The door is of the flush type, covered with metal-faced plywood.

Further illustrations of the house are given on page 207 of this issue.



FRESH WORDS ON PUBLIC WORKS

OVER four months have passed since the publication of our leading article entitled "Last Words on Public Works." That article was in the nature of a summing up of four other leading articles that had preceded it, which dealt with public works from the economic point of view. On Monday the Special Committee for Public Relations of the Building Industries National Council issued a statement* urging the need for the initiation of public works.

It is a timely reminder to the Government that all the problems of a great industry and the economic dislocation entailed by official disinclination to scrutinize intelligent solutions to them are not to be covered by the optimism of statesmen (courtesy title) who insist that "we are about to turn the corner," and that "worrrrld conditions are in a state of flux," and that to meet these unusual evolutions and perplexing affairs "no stone will be left unturned, no avenue unexplored, no step untaken."

Taking the term "Public Works" to stand for any building or engineering work undertaken by, or on behalf of, government departments and local authorities, the Building Industries National Council attempts the measurement of the loss of trade that has followed the panic strictures imposed after the historic economic wobbles of this nation of stop-gappers. The dimensions of the loss incurred by the Building Trade are alarming. Official "economy" measures have, directly or indirectly, marred any resumption of prosperity; and the blind panic of our leaders (courtesy title) may, in time, bring about more destruction and economic carnage than a barbarian invasion of wilfully uncreative savages. These figures uncover the funk and folly that are stirring, like dead leaves, in that almost empty dust-bin called political foresight: these figures represent the amounts of loans sanctioned by the Minister of Health for Public Works in recent years:

Years ending March 31	Loans sanctioned.
1930–31	£47,400,000
1931–32	£34,400,000
1932–33	£20,000,000

The total loss of trade incurred by the Building Industry over this period of three years is thus £27,400,000. To this must be added £12,000,000 "saved" by "economy" in school building programmes, which anybody but a politician would say was £12,000,000 lost to the Building Industry, and an incalculable amount lost to the future of the race. The moronic economics that are labelled as respectable by those who are destitute of imagination have also encouraged "economy" to the tune of £34,500,000 by reduction in work assisted from the Road Fund.

The Committee of the National Council feels that it is impossible to compute accurately the extent of the damage wrought by the Government's official "economy" measures. Mr. Runciman's defence of this brand of egregious folly is justly described as "characteristic of a certain body of short-sighted opinion which seems incapable of looking on both sides of the account."

This Government, that rules the greatest Empire the world has ever seen (or thinks it does) cannot apparently appreciate (and we may be forgiven for repeating this searing fact) that during the last two years or so, some £30,000,000 has been spent in keeping operatives of the building and public works industries idle. And there is nothing to show for it; nothing, unless we count the moral corrosion of our best craftsmen, the bitterness of hope deferred, the shamefulness of pride exiled, which haunt the home of every workman unemployed, which blacken the horizon of British industry, for industry—and this is what politicians cannot understand—is made up of men, and the worth of men can never be conveyed by the symbols the accountant employs, or by the terms used by a politician when he gives his machine-made apology to the world for his gross neglect of the obvious.

£30,000,000 for nothing. Yet, let us repeat what we said last April, under the present system of grants to local authorities the Government—without adding a farthing to the burden of the Budget or making a single extra demand on the Exchequer—could use the same expenditure to promote £45 millions of roads, town halls, public baths and bridges, thereby employing precisely that number of men which it would cost £30 millions to keep idle.

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*Extracts from this statement, issued by the Special Committee for Public Relations of the B.I.N.C., will be found on pages 206–208.

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London

NOTES & TOPICS

MARS

MARS—or Modern Architectural Research—has just been "operating," if one may use the expression reserved for gangs of international crooks, in the seas about the isles of Greece.

*

C.I.A.M.—or International Congresses for Modern Architecture, to give the international gang its full name—includes almost all the famous and legendary figures of our architectural epoch, even to le Corbusier himself. MARS is the English arm of ARPAC. The activities of MARS are as mysterious as its membership.

*

Imagine the tortuous seas, the cloudless skies, the craggy classic islands, and s.s. *Patris* steaming slowly through inconceivable sunsets bearing that impressive and precious burden. One error in navigation and the architecture of the future would have sunk beneath the Grecian wave—not to mention a few hundred maps.

*

The base of operations was Athens. I have just had a letter from one of the ship's company, a member of MARS. The Acropolis was floodlighted, he writes, between 10 and 11 p.m. in honour of the visit of the delegates. But amongst the delegates there was some danger of a Fascist-Communist split.

*

Le Corbusier irritably rolled his own cigarettes.

*

The subject of the Conference was: The Function of the Town. MARS, I hear, produced a complete map of London showing communications and density of traffic. This map was discussed by the delegates and recommendations for development were made. As some of the best planning brains in the world were on the job, the result ought to interest Mr. Frank Pick.

*

My correspondent tells me that the map was so large—over a hundred square feet—that it couldn't be hung in the ship. It was hung, however, in Athens in some lofty chamber—for all I know, in the Parthenon itself.

*

CARLTON HOUSE TERRACE

Refreshing it is to mark how the difficulties surrounding the Carlton House Terrace controversy, which to the intelligentsia appeared insurmountable, are solved by the Town Planning Committee of the L.C.C. in the twinkling of an eye—and all wrongly.

*

But who is this Town Planning Committee that it should take upon itself to redesign Carlton House Terrace? What gives it the right to say that because an architect has made a mistake at one end, it shall be repeated at the other *in order to balance*, when the only balance possible to the composition takes place about the Duke of York's steps. Do they know a column when they see one?

*

Gentle readers, a grave matter of principle is involved. Think deeply on these remarks. They are fraught with meaning.

*

M.INST.R.A.

Silence falls upon the battle-field of architectural registration while counsel ponder. Meanwhile the challenge is between M.Inst.R.A. and the Registration Council, of whom we ask again: Does clause (*f*) allow the Council to promote measures covering the most important objects of the new Institute?

*

Can it establish a code of professional practice for the guidance of Registered Architects, and, if so, should a code and scale of fees be drawn up forthwith? Would infringement of such a code by a registered member render him liable to expulsion from the register?

*

Has the Council defined what a Registered Architect should be? How many architects accepted for Registration are not members of the R.I.B.A. or of a similar body?

*

Without some sort of answer to these questions the issue raised by the establishment of the new Institute is still beyond ordinary comprehension.

*

THE MOYNE REPORT

Lord Moyne's Report, some of the recommendations of which I discussed last week, does two or three very important things. Chiefly it raises the issue of *land* in its "rough justice" system of acquisition. When one realizes that land is the bugbear of slum clearance, that the development of any scheme large enough to promote a general movement towards town re-building in the name of slum clearance is dependent on land, this stab at land monopoly values becomes of terrific importance.

*

On the other hand, the confession of distrust in local authority management of slum clearance is not what you would call balanced by an equal faith in housing utility societies on the other, and the position, without some sort of amalgamation and inspiring leadership among these scattered units, is as good as hopeless.

*

The trouble with all these measures and reports of the Government is a lack of integration. To burst forth with a manifesto on slum clearance, armed only with the 1930 Act, is tantamount to the Minister of Health bawling defiance through the window, and then sending his little brother through the side door to fight the big bully in the front garden.

*

MAJOR HARDY-SYMS

His many friends on the Council of the Garden Cities and Town Planning Association, and on the London County Council, are well pleased at the selection of Major Hardy-Syms as the new Technical Adviser to the Greater Regional Planning Committee.

*

Major Hardy-Syms has done a good deal of work in private practice, and I was particularly interested recently to see his plans for the modernization of a house in Norfolk, which was formerly the home of Sir Rider Haggard. He has been a member of the Housing Committee of the London County Council, and is a loyal supporter of the policy of the Garden City movement.

*

I don't envy him his new job.

*

It is by no means easy to serve a Committee which represents over 100 local authorities. It is still more difficult to accomplish anything of permanent value if the Committee has slight financial resources and is dependent upon annual contributions paid out of the rates; and if, moreover, its powers are purely advisory and not executive. To act as Technical Adviser of such a body is about as easy as riding eight horses at once in a circus.

*

Nevertheless, much can be done by a man of tact and ability, and Major Hardy-Syms has both qualities. I am told that he will probably occupy the offices in Old Queen Street that are to be vacated by Sir Raymond Unwin.

*

SIR RAYMOND'S FUTURE

The past President of the R.I.B.A. will be 70 in November. Any man at that age might be excused if he slacked off a bit. I need hardly say that Sir Raymond has no intention of doing that. He has already made his plans to go to the United States in the autumn to deliver a course of lectures on town-planning.

*

POLITICAL MATERIALS

I was introduced to a new rock garden this week. It was being constructed from stones taken from the House of Lords.

Major Hardy-Syms, who has been appointed Technical Adviser to the Greater London Regional Town Planning Committee in succession to Sir Raymond Unwin, PP.R.I.B.A. He will take up his new duties towards the end of September.

My suggestion that its paths should be paved with bricks dropped in the House of Commons was not well received.

*

MODERN IMPROVEMENTS FOR NEOLITHIC REMAINS

I recently had occasion to stay at Avebury. I had hoped to stimulate my imagination to some sort of reconstructive effort about the original appearance of the place, before those shiftless wastrels of farmers in the eighteenth century had despoiled the stone circles.

*

Avebury is buried deep in solemn peacefulness, but some modern improvements are being instituted.

*

No doubt, in order to reinforce the impression of circles, circles everywhere, some rising industrialist now operates a circular saw at grim hours in the morning.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, August 17

COTTAGES IN THE STRAND. Exhibition, until the end of the month, of the Building Centre prize-winning cottages on the Aldwych site, Strand, W.C.

R.S.A. INDUSTRIAL DESIGNS COMPETITION. At the Imperial Institute, South Kensington, S.W. Exhibition of the designs submitted in the tenth annual open competition. Until August 31. 10 a.m. to 5 p.m. (Sundays: 2.30 to 6 p.m.) 10 *a.m.*

EXHIBITION OF COTSWOLD ART AND CRAFTSMANSHIP. At the Alcuin Press, Chipping Campden, Glos. 11.30 a.m. to 7 p.m. (Sundays: 2.30 to 6.30 p.m.) until September 2. 11.30 *a.m.*

Saturday, August 19

Sunrise, 5.50. Sunset, 8.16.

Tuesday, August 22

LONDON SOCIETY. Up-River cruise from Westminster Pier to Twickenham. 1.45 *p.m.*

TOWER OF LONDON. Walter Bell, F.S.A., F.R.A.S., will conduct parties round the Tower, including Princess Elizabeth's Walk and the Bell Tower, not usually open to the public. Tickets from the Secretary, King Edward's Hospital Fund, 7, Walbrook, E.C.4. 2.30 *p.m.*

NEWS

POINTS FROM THIS ISSUE

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Land is the bugbear of slum clearance 196

A tea-set decorated with views of famous colonial buildings in sepia on an ivory body, trimmed with lines of purple lustre............ 200

Dispossessed owners should be paid what they themselves paid for the property...................... 210

Bad architecture should be a thing that the average man minds about.... 215

L.C.C. AND CARLTON HOUSE TERRACE

The Crown Lands Advisory Committee, of which Lord Gorell is chairman, are to meet in the early autumn to consider the future of Carlton House Terrace.

The L.C.C. have been asked to give evidence at this meeting, and Lord Haddo, chairman of the Town Planning Committee, has been selected to explain the views of the Council.

The L.C.C. have expressed the opinion, in their recently published memorandum, that the future of Carlton House Terrace must be considered in relation to the whole of the Crown property which lies between Marlborough House and the Admiralty Arch. The L.C.C. therefore recommend that the development of this area should be planned as a whole, and that certainly no more offices and commercial buildings should be permitted in Carlton House Terrace. It is also suggested that the height in Carlton House Terrace should be fixed at about 70 ft. to harmonize with buildings on the Pall Mall frontage and immediate neighbourhood. It is, however, suggested that the new building, 4 Carlton Gardens, should be " utilized as an architectural feature with a responding feature at the Duke of York's Monument end of the block."

IS YOUR NAME ON THE LIST?

A statement issued last week-end by the Special Committee for Public Relations of the Building Industries National Council stressed the need for the initiation of public works. Practically every member of the Government has declared at some time in favour of a policy calculated to raise wholesale prices. There is no more effective means of implementing this intention than by initiating schemes of public works. A vigorous policy of public works will raise the level of activity throughout the entire economic system.

The very good reception accorded this statement (extracts from which are printed on pages 206–208 of this issue) indicates that the Special Committee for Public Relations is the recognized official statistical and economic mouthpiece of the building industries. The machinery of this Committee is definitely past the experimental stage, and is now able to assist the industry more effectively than ever before. But the work the Committee is able to carry out for the industry obviously depends on the measure of support forthcoming from the industry.

Subscriptions to the General Fund of the Committee should be made payable to " The Special Committee for Public Relations," and be addressed to the Honorary Treasurer at 5 Duke Street, Adelphi, W.C.2.

PADDINGTON SLUM AREA

The official programme has just been published, signed by Sir Montagu Cox, the Clerk of the London County Council, for the improvement of the notorious Clarendon Street area in Paddington. The procedure which the London County Council has decided to take has not hitherto been tried in London.

It is not proposed to pull down any of the 50 houses in Clarendon Street, but to deal with the sanitary defects and overcrowding under the powers given by the 1930 Act. There will be two separate steps in the procedure adopted.

The dwellings in Clarendon Street contain a basement, ground and two upper floors, and are now occupied in separate lettings of one or two rooms. It will therefore be necessary to displace at least 176 persons, and, as a first step, accommodation for these will be made available in tenements about to be erected at Wormholt Estate, Hammersmith.

The second step will be taken by the Paddington Borough Council which, in due course, will have to remedy the sanitary defects in the houses. No direct expense, except for administration, will rest upon the London County Council, apart from the provision of the new dwellings to relieve overcrowding.

If the " improvement area " procedure in Clarendon Street proves to be successful, it will serve as a guide for similar operations elsewhere.

BERTRAND RUSSELL AS A DICTATOR OF HOUSING

Bertrand Russell, writing in *The Sunday Referee* under the heading " If I Were a Dictator of Housing," said : " While production has become increasingly communal, and is no longer, in its important branches, a matter for the single handicraftsman, our general outlook has become more and more individualistic. In the factory there is social life, which has produced the trade unions ; but at home each family desires isolation. 'I keep myself *to* myself,' the women say. This feeling makes them endure, and even prefer the separate little house, the separate little kitchen, the separate drudgery at house-work, the separate care of children while they are not at school.

" If I were dictator of town-planning I should pull down the squalid streets of separate houses and substitute high blocks of buildings round three sides of a square open to the south to let in the sunshine, with a communal kitchen, a spacious dining-hall, another hall for amusements or meetings, or a cinema, and a nursery-school in the centre, which should be in the open air except in bad weather."

HEATING AND VENTILATING ENGINEERS

Examinations for admission as graduates and associate members of the Institution of Heating and Ventilating Engineers will be held at suitable centres in September and December, 1933, and in May and December, 1934.

Application forms for membership may be obtained from the Secretary of the Institution, 12 Russell Square, London, W.C.1.

ANNOUNCEMENT

Mr. Alec. F. French, L.R.I.B.A., Chartered Architect, has commenced practice at 26 St. Nicholas Street, Bristol. Telephone No. : Bristol 23518.

THE LATE LUCA BELTRAMI

Luca Beltrami, the Italian architect, the restorer of the Castle of Milan, died in Rome, on August 8, in his seventy-ninth year (states *The Times*).

Born in Milan in 1854, Beltrami, after taking his architect's degree at the Polytechnic Institute, at Milan, went to Paris to complete his studies. Here, he was successful in passing the examination for admission to the Ecole Nationale des Beaux Arts, thus being the first Italian to enter the school. From that time he devoted himself, in addition to his work as an architect, to historical studies and researches. In 1881, after five years in Paris, he returned to Milan, where he occupied himself especially with the ancient monuments, the churches, and the works of art of the past. His activity as a scholar and architect was great. He made a particular study of Leonardo da Vinci, and was nominated a member of the commission created in 1905 for the national edition of the writings of the great Italian.

It can be said that for half a century Luca Beltrami devoted his activity and his studies to the reconstruction and illustration of the historical monuments and buildings of his native town. He was also the architect of several of the best modern palaces, and he played a great part in the reconstruction of the famous Campanile of St. Mark after its collapse. He was also architect for the new Vatican Picture Gallery, opened last year.

THE LONDON PAVILION

Plans have been passed by the London County Council for the conversion of the London Pavilion, Piccadilly Circus, into a cinema. The seating capacity of the building is to be increased to accommodate 2,000 persons.

MENTAL HOSPITAL FOR WICKFORD

The East Ham Council have approved the plans, prepared by Messrs. Elcock and Sutcliffe, FF.R.I.B.A., for the building of a joint mental hospital for East Ham and Southend at Runwell, near Wickford, at a cost of £540,571.

PRAGUE PROFESSOR TO VISIT ENGLAND

Dr. Ing. Otakar Stepánek, Professor at the Prague University College of Technical Science, is coming to England towards the end of this month in order to study here some outstanding industrial or commercial buildings. He is due to arrive on August 26 and will stay for about a month.

STRETFORD'S NEW TOWN HALL

The Earl of Derby is officially to open the new Town Hall at Stretford, on Saturday, September 16.

SLUM

A national housing campaign is to be launched in the autumn, with the special object of urging local authorities throughout the country to proceed with the fullest possible vigour in dealing with the slum problem. The campaign will open with a meeting at the Kingsway Hall, London, on October 28. The scheme has been initiated by the London Trades Council, with the co-operation of the National Federation of Building Trades Operatives.

THE HOUSING PROBLEM

The housing problem was the subject of addresses by Mr. Seebohm Rowntree and Sir Owen Williams, K.B.E., at the Liberal Summer School, Cambridge, last week.

Eric Kennington's latest sculpture. A monolithic figure of the God of Battles, executed in Portland stone.

Mr. Rowntree strongly criticized the "criminal policy of pouring out money on housing without providing for proper planning and layout." Millions of pounds, he said, had been wasted because the majority of those responsible for the lay-out of new housing estates were completely ignorant of the elements of modern principles. The Government should provide assistance only on condition that expert advice on estate planning was taken. Manuals with plans and a variety of cottage elevations should be issued. He did not expect local authorities to be experts in those matters, but the Ministry of Health ought to be expert.

Sir Owen Williams, speaking on "The realism of humanism in housing," said the principal object of housing was the conservation of heat in the human body. When people were huddled together in slums they certainly did not lose heat. In some of the new flat dwellings a man might use his whole income without preventing a loss of heat damaging to health. Slum-dwellers might very easily exchange overcrowding for pneumonia.

The proper object of a State housing policy was to preserve people's heat units, not to provide toys for people to play in. Houses should be the zero of the lives of the people, the point from which their life started. The mathematical and really necessary amount of floor space on a given ground space was exactly equal to that ground space. The economic height of residential building, he calculated, was five storeys. This was the height at which buildings could be put up most cheaply according to their return and, therefore, with the minimum of economic effort.

A rational system of building would place us in rectangular buildings facing east and west. Apart from mediæval needs of military defence, there was no value in a quadrangle. The maximum number of people resident on an acre should be 250. In the worst parts of London this was seldom exceeded except when the people were rehoused. If the railway fares paid by working families living at Dagenham, where many Londoners had been rehoused, were capitalized, it gave a figure equivalent to £25,000 an acre for rehousing on the site. By putting people there the Government did not really solve the housing problem, but put it on the shoulders of the man who had to travel to his work from the place.

NEW MUNICIPAL BUILDINGS FOR HUDDERSFIELD

At a recent meeting of the General Purposes Committee of the Huddersfield Corporation it was decided to proceed with the municipal building scheme, estimated to cost £300,000.

MUNICIPAL BANK, BIRMINGHAM

The new head offices of the Municipal Bank, Broad Street, Birmingham, is to be opened by H.R.H. Prince George on Monday, November 27. The total cost of the building, designed by Mr. T. Cecil Howitt, F.R.I.B.A., was £83,000.

ARCHITECT'S APPOINTMENT

Mr. Victor Watkins, F.R.I.B.A., has been appointed architect for the new flower market at Spitalfields, which is to be erected at an estimated cost of £65,000.

HANTS. AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION

Mr. Howard Robertson, F.R.I.B.A., was the chief speaker at the opening, last month, of an exhibition of architectural drawings at University College, Southampton. The exhibition was organized by the Hampshire and Isle of Wight Architectural Association. It included prize drawings by students of the R.I.B.A., as well as the competition drawings of Hampshire students submitted for a measured design competition arranged by the Hampshire Association.

Mr. Robertson, discussing the future of architecture, said it was necessary that all who took a pride in design should band together to ensure that the trained architect was not ousted on the score of economy. In public building work it was altogether to be deprecated that the designing should be left to the borough engineer. It might save a few hundred pounds at the moment and cost a few thousand pounds in the future. Architects were trying to educate the public in this matter. The Royal Institute was giving lectures to children, even to very young children, and he had been struck with the interest which they showed in the subject when it was properly presented to them. That was a bright hope for the future. Architects were also educating themselves, and here they had an exhibition of what was happening in that direction. Centres of architectural education, such as the Hampshire Association had at Winchester, Portsmouth, Southampton, and

Bournemouth, were an assurance that whatever happened in the future there would be no really bad work done by architects. There had been bad work done in the past, but the schools should obviate that in the future. There might be much brilliant work, and much good work, but the absence of the bad work was the strongest side in architectural education.

Some people, he continued, complained that there were too many architects being educated, but he believed that there were only 264 young architects coming out from the schools, and that was not nearly enough to repair the ordinary wastage of the profession, so he did not think they need fear a congestion in the profession ; there was hope for them all.

The first and second prizes in the competition arranged by the Association were awarded to Mr. Eric G. Broughton, of Portsmouth, and Mr. R. P. Sawyer, of Winchester, respectively.

R. I. B. A.

ARCHITECTS *v.* SURVEYORS

The following letter from Mr. Kitson, Hon. Sec. of the R.I.B.A., entitled "Architects *v.* Surveyors," was published in *The Daily Telegraph* for August 15 :—

SIR,—It has been reported in *The Daily Telegraph* that Sir Edwin Lutyens resigned from the R.I.B.A. because of his dislike of what he considered to be the narrow policy of the Institute in barring surveyors from membership. In this your correspondent was misinformed.

Sir Edwin was a member of the R.I.B.A. for many years, and at no time did he raise any question as to the desirability of admitting surveyors, nor was this ever a point of issue between him and the R.I.B.A. It could not be a point at issue because the R.I.B.A. contains several hundred surveyors who are also architects, and their status is identical with that of any other member.

For surveyors pure and simple the Chartered Surveyors' Institution is the recognized official body, and their status needs no further safeguarding.

Yours, etc.,
SYDNEY D. KITSON,
Hon. Sec., R.I.B.A.

GIFT OF TEA SET TO THE INSTITUTE

As a means of stimulating employment and of obtaining a substantial addition to the Fund for the relief of the unemployed in the architectural profession in America, an "architects' tea set" of copyrighted design and of limited production is now being manufactured for the American Women's Division of the Architects' Emergency Committee.

The set is a reproduction of a colonial model, executed especially for the Committee in the best quality of Lenox china and decorated with views of famous colonial buildings in sepia on an ivory body, trimmed with lines of purple lustre. The first coat-of-arms of the United States of America is on the reverse of the tea-pot, cream-jug and sugar-basin. The views, taken from old prints, have been drawn by Mr. Schell Lewis, who has given his services.

Her Majesty the Queen has graciously consented to receive one of these sets, and another set has been presented to the R.I.B.A. by the Committee through Mr. Julian Clarence Levi, Chairman, as evidence of the cordial relations existing between the members of the profession in America and Gt. Britain.

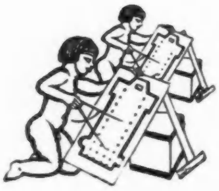
The Council of the R.I.B.A., at their last meeting, passed a resolution expressing their sincere thanks to Mr. Levi and the Architects' Emergency Committee for their most interesting gift.

COMPETITIONS BARRED

The R.I.B.A. have issued the following notice regarding the competitions for the proposed Infants' School, Tunnel Hill Road, Worcester ; Bathing Pool, Llandudno ; and the Elementary School, Hen Lane, Coventry :

"Members of the R.I.B.A. and of its Allied Societies must not take part in the above competition, because the conditions are not in accordance with the published Regulations of the Royal Institute of Architectural Competitions."

COMPETITION



NEWS

Competitions Open

September 1.—Sending-in Day. Proposed Hospital at Surbiton. Assessor : C. E. Elcock, F.R.I.B.A. Premiums: £120, £75, £50 and £25. The conditions, obtainable from A. C. C. Dunn, Hon. Secretary, Surbiton Hospital, St. James's Road, Surbiton, were reviewed in *A.J.* for May 24.

September 11.—Sending-in Day. The Directors of Gidea Park, Ltd., invite designs for five different types of house (ranging from £400 to £900). Assessors : Prof. S. D. Adshead, F.R.I.B.A., A. E. Beresford, F.R.I.B.A., Ald. Ewart G. Culpin, F.R.I.B.A., E. Maxwell Fry, A.R.I.B.A., Howard Robertson, F.R.I.B.A., and W. Harding Thompson, F.R.I.B.A. In addition to being paid a fee according to the scale of charges of the R.I.B.A., the authors of the first five selected designs in each class will be paid a premium of £10. Particulars obtainable from Gidea Park, Ltd., The Estate Office, Hare Street, Gidea Park, Romford, Essex. Deposit 5s.

September 21.—Sending-in Day. Proposed Town Hall for the Borough of Hornsey. Assessor : C. Cowles-Voysey, F.R.I.B.A. Premiums : £350, £250 and £150. Full conditions, etc., were published in our issue for May 17.

September 30.—Competition for speculative house designs, organized by the Architectural Association with the co-operation of Messrs. J. Laing and Sons, Ltd. Three types of house are required. Assessors : C. Lovett Gill, F.R.I.B.A. ; L. H. Bucknell, F.R.I.B.A. : J. R. Leathart, F.R.I.B.A. : Arthur W. Kenyon, F.R.I.B.A. ; T. Alwyn Lloyd, F.R.I.B.A. ; and J. W. Laing. Premiums : £25 for the design placed first in each group. Copies of the conditions are being issued free, on application, to all members of the Architectural Association, and members of the R.I.B.A. can obtain copies (price 2s. 6d.) from Mr. F. R. Yerbury, General Secretary, The Architectural Association, 34-36, Bedford Square, W.C.1. Full particulars of the competition were published in *A.J.* for July 27.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor : H. S. Goodhart-Rendel, F.R.I.B.A. Premiums : £150, £100 and £50. Conditions have not yet been drawn up.

Development of the coastguard site, Bexhill. Assessor : T. S. Tait, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor : R. S. Wilshere A.R.I.B.A. Conditions are now being drawn up by the assessor.

Decoration of a café-restaurant. Assessors : G. Grey Wornum, F.R.I.B.A. ; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums : 50 guineas, 15 guineas and 10 guineas.

Conditions governing the competition, which closes on December 15, 1933, will be issued on September 30 next.

THIS ARSHETECTURE

Madrid, June 22, 1933.

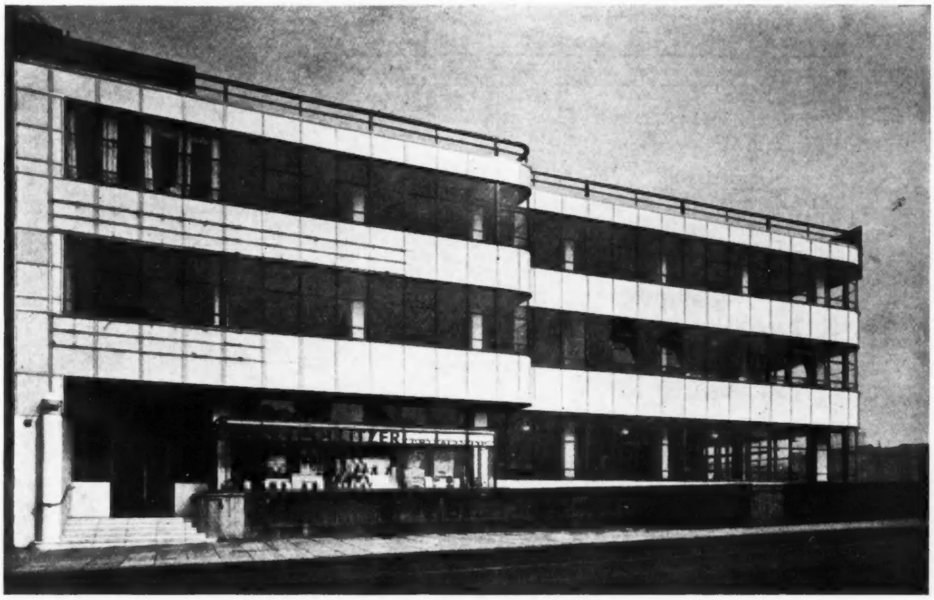
With abundant good taste and striking modernity, Casablanca, the most up-to-date cabaret in the world, was opened last night to a distinguished and limited *clientèle*. I call it, without reservation, the most modern in the world, as I have not seen its equal in London, Paris or New York, although it may be smaller than many in other European capitals.

With vague, richly arrayed Africans flitting silently here and there, and a palm tree and cactus motif in the decoration, one immediately loses the rather sordid air of the usual Spanish cabaret. On the balcony floor, into one wall is let a long glass case containing live monkeys and exotic birds, the back of which is lighted to reproduce various stages of daylight. Even the lamps on the tables hide their twentieth-century glare under the disguise of mushrooms.

The bar, which resembles the African counterpart of a cloister, is backed with a wall cleverly lit and designed to simulate the desert sky, even to realistic cloud effects. Immediately behind the bar, instead of the usual row upon row of bottles, is a simple lattice with a few vines clinging to it.

—From *The Melody Maker.*

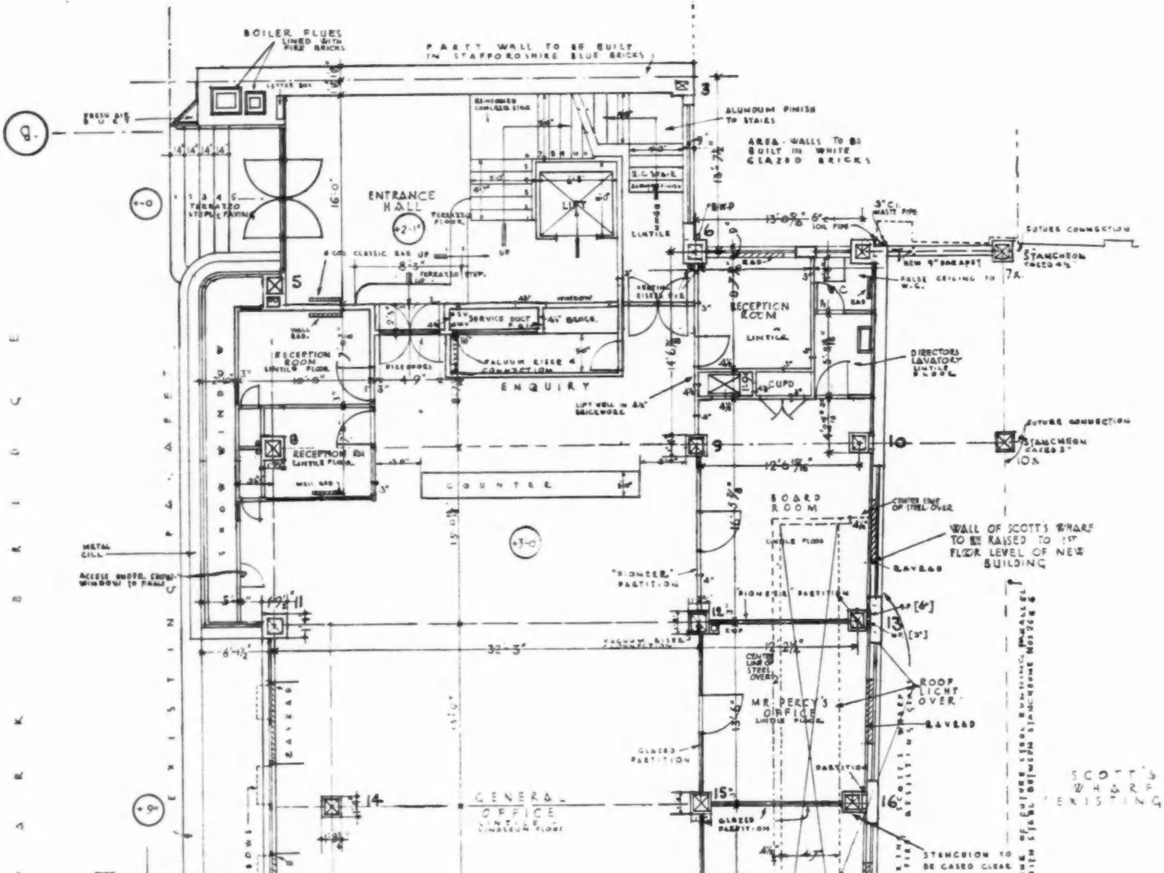
UNIVERSAL HOUSE, SOUTHWARK



This office building, for Messrs. Beck and Pollitzer, is situated at the end of Southwark Bridge, on the Surrey side of the River Thames. Approach to the wharf is provided under the building, connection to the street being through the land-arch of the bridge (see plans on the following pages). The cantilever principle on which the building is constructed was chosen for two reasons: to keep the foundations of the stanchions away from the foundations of Southwark Bridge, and to economize in steel. Owing to the site on which the building stands being of made-up ground, the base of each stanchion is carried on a group of piles driven to a depth of approximately 25 ft. The photographs above show the building from the bridge approach and from the river.

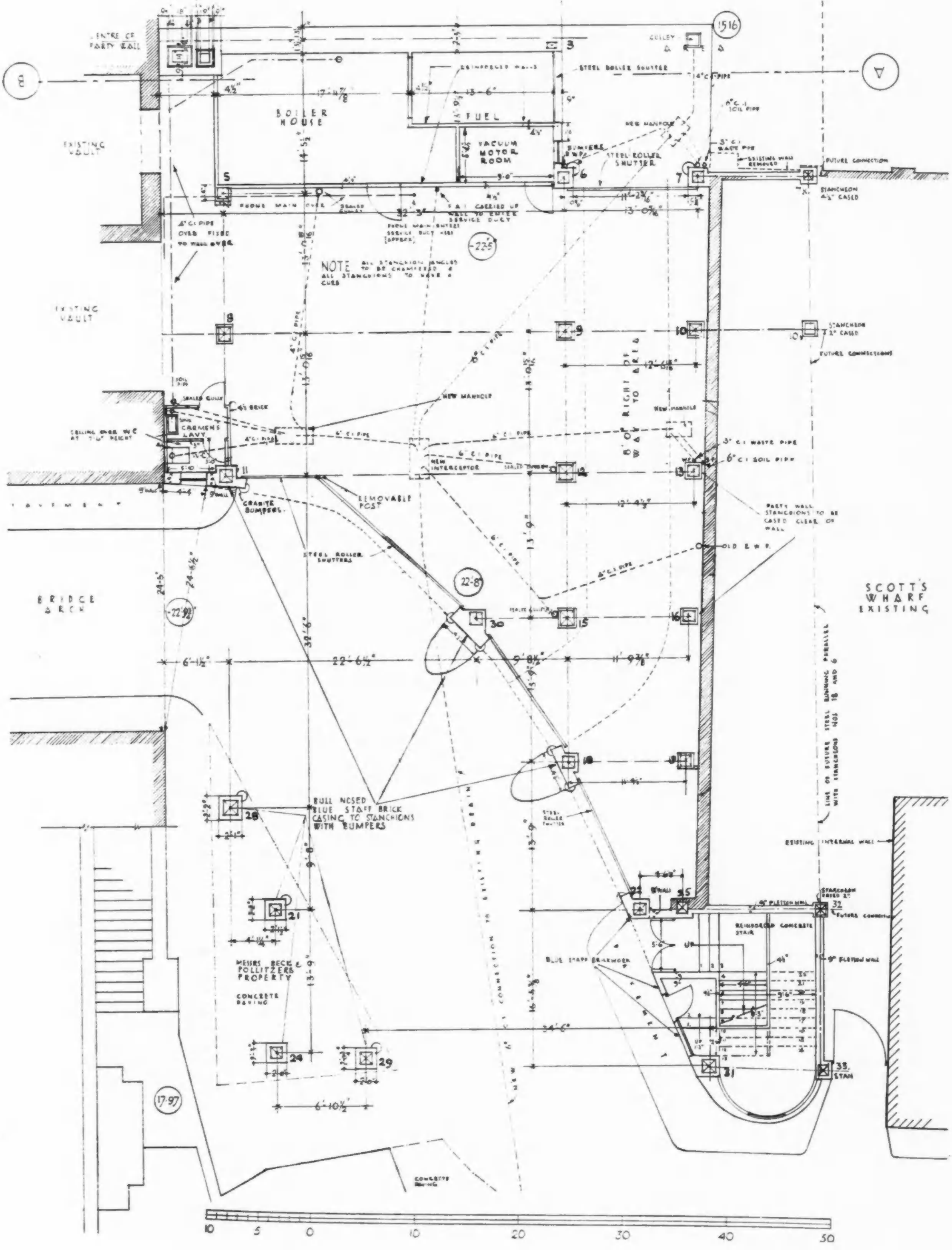
DESIGNED BY JOSEPH EMBERTON

UNIVERSAL HOUSE, SOUTHWARK


BOILER FLUES LINED WITH FIRE BRICKS
PARTY WALL TO BE BUILT IN STAFFORDSHIRE BLUE BRICKS
FRESH AIR DUCT
TERRAZZO STEPS & PAVING
ENTRANCE HALL
TERRAZZO FLOOR
LIFT
R.C. STAIR
ALUMINIUM FINISH TO STAIRS
AREA WALLS TO BE BUILT IN WHITE GLAZED BRICKS
RECEPTION ROOM LINTILE FLOOR
SERVICE DUCT
VACUUM RISER & CONNECTION
ENQUIRY
LIFT WELL IN 4½" BRICKWORK
RECEPTION RM LINTILE FLOOR
COUNTER
RECEPTION ROOM LINTILE
CUPD
DIRECTORS LAVATORY LINTILE FLOOR
FALSE CEILING TO W.C.
NEW 9" PARAPET
STANCHEON CASED 4½"
FUTURE CONNECTION
STANCHEON CASED 3"
BOARD ROOM
CENTRE LINE OF STEEL OVER
WALL OF SCOTT'S WHARF TO BE RAISED TO 1ST FLOOR LEVEL OF NEW BUILDING
"PIONEER" PARTITION
METAL CILL
ACCESS UNDER SHOW WINDOW TO FANS
SHOW WINDOW
EXISTING PARAPET
SOUTHWARK BRIDGE
32-3"
GENERAL OFFICE LINTILE LINOLEUM FLOOR
MR. PERCY'S OFFICE LINTILE FLOOR
ROOF LIGHT OVER
GLAZED PARTITION
SCOTT'S WHARF (EXISTING)
STANCHEON TO BE CASED CLEAR OF WALL
MR. JOSEPH'S OFFICE LINTILE FLOOR
CENTRE LINE OF STEEL OVER
MR. EDWARDS OFFICE
GLASS PARTITION
STRONG ROOM
METAL CASED DOOR
OPENING BALANCE TYPE WINDOWS
EXHIBITION DEPARTMENT LINTILE LINOLEUM FLOOR
MR. GEORGES OFFICE LINTILE FLOOR
REINFORCED CONCRETE STAIR
5-0" 5-2¾" 28-1¼"
10 5 0 10 20 30 40 50

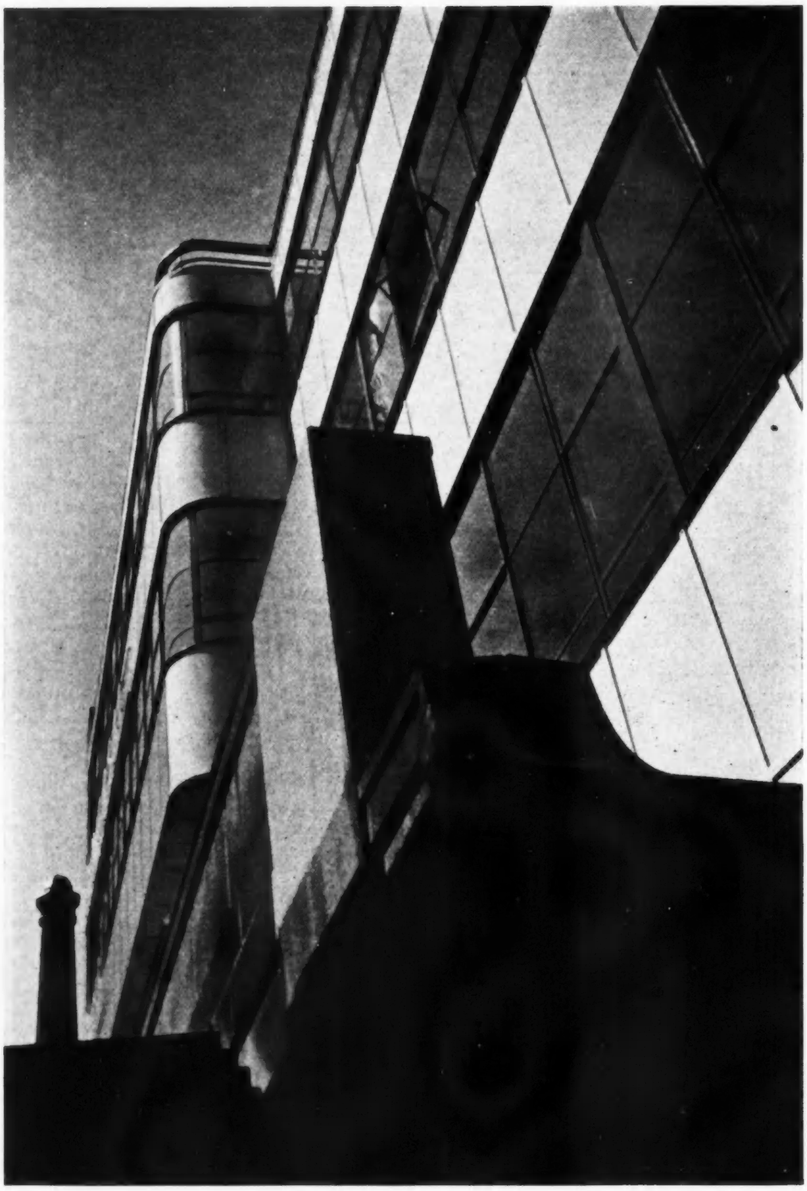
PLAN AT STREET LEVEL

BRIDGE; BY JOSEPH EMBERTON


CENTRE OF PARTY WALL
EXISTING VAULT
BOILER HOUSE
FUEL
VACUUM MOTOR ROOM
REINFORCED WALLS
STEEL ROLLER SHUTTER
GULLEY
AREA
1516
4" C.I. PIPE
4" C.I. SOIL PIPE
NEW MANHOLE
BUMPERS
STEEL ROLLER SHUTTER
3" C.I. WASTE PIPE
EXISTING WALL REMOVED
FUTURE CONNECTION
STANCHEON 4½" CASED
PHONE MAIN OVER
F.A.I. CARRIED UP WALL TO ENTER SERVICE DUCT
PHONE MAIN ENTERS SERVICE DUCT HERE [APPROX]
4" C.I. PIPE OVER FIXED TO WALL OVER
22·5
NOTE ALL STANCHION ANGLES TO BE CHAMFERED & ALL STANCHIONS TO HAVE A CURB
EXISTING VAULT
STANCHEON 2" CASED
FUTURE CONNECTIONS
5'0" RIGHT OF WAY TO AREA
SEALED GULLY
4½" BRICK
CEILING OVER W.C. AT 7'0" HEIGHT
CARMEN'S LAVY
4" C.I. PIPE
6" C.I. PIPE
NEW MANHOLE
NEW INTERCEPTOR
3" C.I. WASTE PIPE
6" C.I. SOIL PIPE
PAVEMENT
GRANITE BUMPERS
REMOVABLE POST
PARTY WALL STANCHIONS TO BE CASED CLEAR OF WALL
OLD R.W.P.
STEEL ROLLER SHUTTERS
22·8
BRIDGE ARCH
22·92
SCOTT'S WHARF EXISTING
LINE OF FUTURE STEEL BRACING PARALLEL WITH STANCHIONS NOS 18 AND 6
BULL NOSED BLUE STAFF BRICK CASING TO STANCHIONS WITH BUMPERS
EXISTING INTERNAL WALL
STANCHEON CASED 2"
9" PLETTON WALL
FUTURE CONNECTION
REINFORCED CONCRETE STAIR
BLUE STAFF BRICKWORK
UP
9" PLETTON WALL
MESSRS BECK & POLLITZERS PROPERTY
CONCRETE PAVING
NEW 6" C.I. CONNECTION TO EXISTING DRAIN
STAN.
17·97
CONCRETE PAVING
3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 19, 21, 22, 24, 28, 29, 30, 31, 32, 33, 35
A
B
10 5 0 10 20 30 40 50

PLAN AT WHARF LEVEL

UNIVERSAL HOUSE



The walls of this building are of 4½ ins. reinforced concrete, faced on the inside with 1½ ins. of cork. This provides better insulation than would be achieved by a 14 ins. brick wall (insulation being important in order to counteract the heat losses involved by the large window area), and is of minimum weight and thickness, thus economizing in floor-space and in steelwork.

The concrete is faced externally in rough-cast glass, which is impervious to the weather, held in position by non-corrosive metal strips. In order to avoid cross draughts, but at the same time to ensure adequate ventilation, the balanced type of window, such as is frequently used for hospitals, was chosen. Panels of radiators have been formed under each window. The photograph above was taken from the steps of Southwark Bridge.

Constructional details of this building are given in the Supplement accompanying this issue.

DESIGNED BY JOSEPH EMBERTON

LETTERS *FROM* READERS

G. C. LAWRENCE, F.R.I.B.A.

PETER RUSSELL

HAROLD FALKNER, F.R.I.B.A.

The Institute of Registered Architects

SIR,—The letter of the Chairman of the Registration Council (see page 131, *A.J.* for August 3) is interesting and, by reason of its mental confusion, explanatory of much; for, alas, a sequel is not, as he so naively suggests, "that which necessarily follows." Too often, as Sir Edwin Lutyens has so entertainingly demonstrated, it proves to be "that which need never have occurred."

By decree of Parliament (with the acquiescence of this Chairman), the Statutory Register is voluntary in its operation and anti-monopolistic in its constitution. It is an altogether unnecessary and avoidable sequel to the Act of 1931 that attempts should be made to convert such a Register, by the accumulation of preponderating sectional votes, into a semi-compulsory and actually monopolistic machine; yet it is plain that following, if not provoked by, the activities of deluded chartered registrationists, the capture of the Register is the objective of the promoters of the Institute of Registered Architects. It is no less clear that perception (as opposed to muddle-headedness), in this matter of "sequelæ" is likely to prove the determining factor in a profitless game of beggar my neighbour.

For example, did the well-intentioned writer, whose slogan in a recent issue of the JOURNAL was "Delays are Dangerous," realize that if, as it suited his then purpose to suggest, the unregistered chartered architect is now without legal professional status, then, as an inevitable sequel, the Chartered Institute—the Old Lady of Conduit Street—is ripe for matricide? If this suggestion has any basis in fact, is it conceivable that the rising generation to which it is addressed would consent to burden itself with the maintenance of an impotent centenarian, demeaned from within her own family circle as well as by trusted friends? Let chartered architects take note. If, in fact, the Register is the friend, not the Charter—then the Charter is doomed!

Hence the Institute of Registered Architects. Sir Edwin Lutyens and his friends have been quick in grasping their supposed opportunity. If monopolistic control of a Register which nullifies the status of the chartered architect can be obtained, their scheme for the establishment of an unadulterated registrationist monopoly must succeed. But, be it remembered, Parliament's reluctant approval of a futile, dud machine was subject to its prior and repeated declaration that it would tolerate no interference with the free exercise of architectural talent, wherever and whenever displayed within the bounds of the United Kingdom.

Meanwhile, let the chartered architect ignore fables and rest content.

G. C. LAWRENCE

Competitive Design of Steel Structures

SIR,—With regard to the review of our book, *Competitive Design of Steel Structures*, in your issue for July 13, we should like to point out that the word "competitive" in the title is used in its literal sense, i.e., designs submitted in competition with others, and is not intended to refer to structures with a deficient margin of safety; these, of course, we do not recommend. Our object is to submit designs having a factor of safety reasonably near the recognized standard. The fact that it is possible to have a competitive design strictly in accordance with the L.C.C. or B.S. Specifications has apparently been overlooked.

PETER RUSSELL
(for RUSSELL AND DOWELL)

Architecture as a Trade

SIR,—Mr. Martin Kaye and Iconoclast need not be in the least excited over the question of how the Allied Societies or the general members should be represented on the Council of the R.I.B.A.

No one except the representative, who, in spite of previous examples, hopes to reap some personal advancement or exaltation from the said representation, cares a gnat's eyebrow who is or is not on the Council, or whether the Council consists of ten or a thousand members.

I do not wish to be ungracious to a body which has enfolded me (*honoris causa*), in their ranks; but from long acquaintance with members of the Council, I know this to be the fact.

A longer intimacy with the Institute and its history would have prevented my friends from making the mistake of supposing that the Allied Societies are entitled to a larger representation.

Representation is surely due to and should be proportional to eminence in the profession. Until a few years ago the idea that an architect should set up an office outside London would have been scoffed at, and I do not know that the position has materially altered.

A far more important matter should engross the ingenuity of your correspondents; in fact, of all the members of the profession. The results of the Registration Bill are now becoming evident. And it is our (I have been a lifelong opponent) turn to say "We told you so."

The net result of this Bill is that every person who chooses to risk 7s. 6d. can be registered as an architect.

This is the long foreseen though slowly developed result of the overweening confidence and assurance derived from the holding of a diploma, consequent on the passing of a very elementary examination in subjects, most of which are obsolete; the hallucination, in short, that the passing of this (the R.I.B.A.) or any other examination entitles a man, woman or boy to assume the title "architect."

HAROLD FALKNER

BATTY LANGLEY
and his patron
LORD ONGLEY

[*The following letters, exchanged in 1770 between Batty Langley, architect, and Lord Ongley, newly created in the peerage of Ireland, are taken from Mr. John Betjeman's book,* GHASTLY GOOD TASTE, *which is reviewed on pages 214-215 of this issue. The author quotes them to illustrate the typical relations between patron and architect at the end of the 18th century.*—ED., *A.J.*]

To Batty Langley, Esq.,
Archt.

Lord Ongley presents his compliments and is obliged to Mr. Langley for his designs for his new residence at Old Warden. He was insistent, when he last saw Mr. Langley, on all absence of *Fandango* and of plaster-work within the house in the saloons and withdrawing-rooms, in what it pleases Mr. Langley to call the *Gothick* or *Hermit* style. Vitruvius, as Mr. Langley is no doubt aware, says that architecture consists of *Fabrica et ratiocinatio.* If Mr. Langley will allow the latter of these two qualities to exercise his mind he will know that neither Lord Ongley

nor Lady Ongley are Goths or Hermits. Though they would not wish their entertainments to be ostentatious, they would wish them to be profuse. Mr. Langley has provided no more than two withdrawing-rooms from the saloon, nor has he provided the space necessary for his Lordship's collection of ancient coins and busts. The library is not large enough and the accommodation for Lord Ongley's servants, who number twenty-six, though fitting for their station, it can but be obvious to Mr. Langley, is inadequate for the storing and cooking requisite for the banquets that are projected in the New Hall at Old Warden. Should Mr. Langley desire further to display his skill in abstruse and *ancient* styles, Lord Ongley will be pleased for him to do so in the *Summer Pavilion* and *Eye-catchers*. Considerable acreage of land in the county is in the possession of Lord Ongley, and the eminence on which the New Hall is to be situate commands a fine prospect as far as Langford and Clifton Arlesey, all of which can be cleared to widen up the view and cause Lord Ongley's mansion and domain to be another Chatsworth, Carton or a Russborough. Mr. Langley will save his Lordship considerable time in writing lengthy letters, if he will send a larger design with a bolder frontage and a finer and *less mean* interior, worthy both of his Lordship's rank in life and the talents of his architect. Should this be impossible there is doubtless another *modern Vitruvius* capable of producing a design worthier of Lord Ongley's patronage than is Mr. Langley. *Sept.* 17, 1770.
Old Warden, Bedfordshire.

Mr. Langley's Answer

MY LORD,

I am in no way to be thought to despise or to take into little account the gracious condescension which your Lordship has hitherto seen fit to employ. But, my Lord, there is a moment when plain words must be uttered. I have spent near thirty year now in the prosecution of my business of architect, and with great toil and application I have arrived at a proper estimation, or so I would believe, of what is due both to your Lordship and to your humble servant. I grant the truth of your Lordship's observations as to the withdrawing-rooms, and the space needed for your Lordship's collections ; and these matters, as that of due provision for the storage of victuals and the cooking and serving of the same, shall be speedily amended, should your Lordship see fit to continue his present patronage. On all these matters, I bow to your Lordship's greater knowledge and cry *Mea Culpa !*

But, my Lord, though I admit the truth of Vitruvius his observation, which your Lordship cites, I see not the application. My bosom almost bursts when I read your Lordship, so justly renowned for his learning and taste, to despise the *Gothick* or *Hermit* manner. My Lord, bethink you, if I may make so bold, that we have cast aside this two years the fashions which your Lordship would prefer ; that *Fandango* and *Gothick* plasterwork *within* are now universal in the politest circles.

Your humble servant's station in life is so far below that of your Lordship, that only the sternest necessity would lead him to address your Lordship in such bold terms. But, my Lord, I should not be an honest man, nor deserving of your Lordship's regard, were I not to say plainly that what your Lordship would desire is *out of fashion*, and that *Fandango* is *in*. Of the truth of this I have the strongest assurance from the metropolis so late as last Thursday week.

I pray you, my Lord, give further consideration to the matter. I study only your Lordship's interests when I say that I cannot bring myself to confine the *Gothick* to the purlieus of your new Mansion. The whole must be of a piece and in consonance. My conscience will not allow me to play *hoity-toity* with so serious a matter.

I fear I shall have offended your Lordship in daring thus to express myself, but believe me, my Lord, nothing is further from the thoughts of your humble servant than to offend his most esteemed and worshipful patron.

I am, my Lord,
Your Lordship's humble servant,
BATTY LANGLEY

Lord Ongley to Batty Langley

Mr. Langley, do not speak to me about the fashions for what I know of them I despise and what I do not I prefer to ignore. I asked for a noble palace and all I receive is ignoble flattery. Were you as able with your pencil as you are with your quill I would have more words of commendation for designs which I doubt I will ever receive. It is eight weeks now since I returned to you your former plans as mean conceptions, overloaded with decoration, since then I have had no more than your polite but indefinite letter. Allow me, sir, to state my wants and if my temper seems to get the better of me, remember that it is through stating my wants too often, both to you in person and through the tiresome medium of a written statement. I require a mansion worthy of the position I occupy with regard to my tenantry, and worthy of the landskip in which I have chosen to place it. First let it be convenient, next let it be elegant without ostentation, impressive without Italian or Gothick heaviness, desirable without exciting the envy of the covetous, yet calculated to impress the mean-spirited. All these qualities it is possible for an architect to incorporate in his designs if he is not so guided by fashion that he cannot call his soul the possession of an All Wise Creator, and if he is not so lacking in the Spirit of Inspiration that he cannot conceive greater grandeur than he sees from his window in St. Giles. Sir Christopher Wren and Mr. Gibbs, and even my lamented father's friend Dean Aldrich, were capable of fine conceptions and of carrying them out honestly and without undue expense. You have the reputation they enjoyed, let me see their ability. As for your ideas of fashion let them be guided by *ratiocinatio*. Doubtless your Goths and Hermits will be welcomed by empty headed cits who have neither the Learning nor the Breeding to find worthier objects of entertainment. I do not wish to dispose the patronage which you have enjoyed from yourself to someone of more rapid methods. Pray let me have the plans with due haste ; my Lady Ongley wilts in her present discomfort here, since it is not the time to go to Bath while I regret the rude shelter which my ancestors enjoyed, as my mind daily awaits the spacious dwelling you are to prepare, and is daily disappointed.

ONGLEY

Building Industries

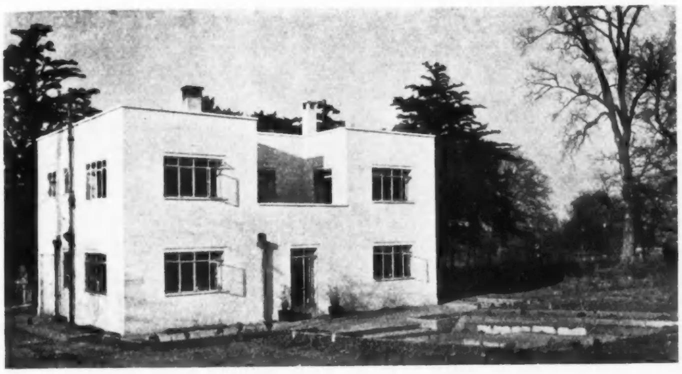
National Council

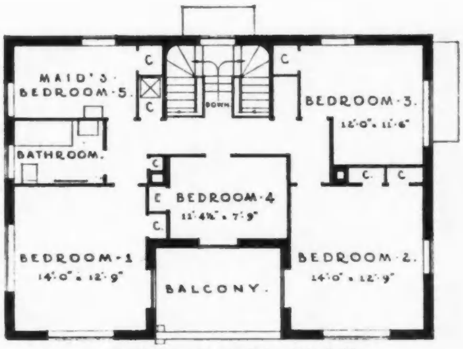
STATEMENT ON PUBLIC WORKS BY THE S.C.P.R.

FOLLOWING are some extracts from a statement on public works, issued by the Special Committee for Public Relations of the Building Industries National Council on Monday last :—

A greater proportion of the wholly unemployed males in the country is to be found in building and public works than in any other industry, and this proportion seems likely to increase in the coming months. In June, a month in which unemployment in the building and public works industry normally declines, unemployment in building remained stationary while the figure for public works increased. In July the pre-

A HOUSE AT LEATHERHEAD

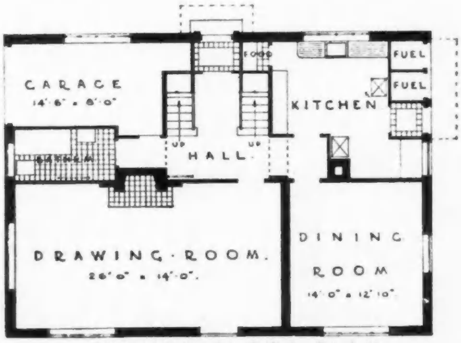




FIRST FLOOR PLAN

This house at Ridgeway, near Leatherhead, Surrey, has been designed to provide a simple dwelling for a small family.

The photograph shows the main garden front, taken from the south-west. The ground slopes upwards from the house, and a sunk garden has been formed in roughly cast concrete slabs. It will be noted from the isometric drawing that a balcony serves three bedrooms. From this balcony access is gained to the flat roof. The roof is of asphalt on boarding. The walls are in 11 ins. cavity brickwork, of Flettons with rustic Fletton facings, cream-washed; and the windows are of metal, specially made, but of a standard section. The cost per foot cube, including hot water, a small amount of central heating, electric wiring, etc., but not including paths or fences, worked out at almost exactly 1s. 0¾d.



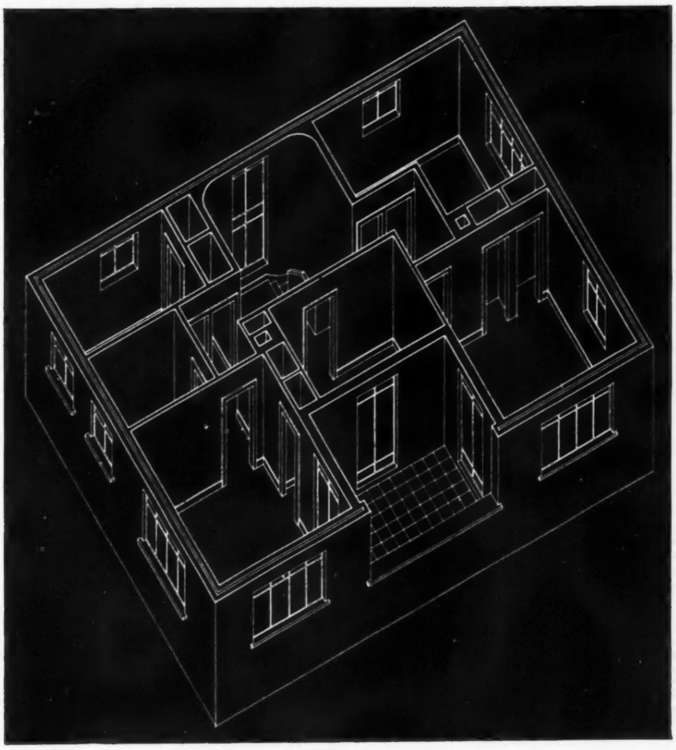
GROUND FLOOR PLAN

liminary figures for Great Britain, published on August 9, show an increase of 7,256—2,529 for building and 4,727 for public works. These figures, it must be remembered, are recorded at a time when the total volume of unemployment is declining. There is a danger, therefore, that, just as the increase of activity in building and public works stimulated other industries in the spring and led to a decline in the total numbers unemployed, so the decline in constructional activity reflected in the unemployment figures will spread to other industries and lead to an increase in the total numbers unemployed.

Actually, the "economy" policy is refuted for all thinking persons by its results. The measure of the blow to the building and public works industry lies in the unemployment figures. The winter of 1932-33 was the most disastrous on record with unemployment rising to the staggering total of 457,000 in January, apart from unemployment among professional men. Since the "economy" campaign it is estimated that between 180,000 and 200,000 former wage-earners, normally attached to the building and public works industry, have exhausted their transitional benefit period and are reduced to a state of virtual pauperism. It is no coincidence that, during the period in which the loan sanctions given by the Minister of Health were more than halved, unemployment in the public works side of the industry more than doubled.

The recent debate in the House of Commons on the Monetary and Economic Conference has afforded little indication of the present policy of the Government with regard to public works, but has indicated the strength of the body of opinion in favour of a policy of expansion. It would appear that enlightened and instructed opinion in the country is in favour of a consistent policy of nationally planned public works.

The Government, we are informed, is "searching round all the time to see in what direction we



DESIGNED BY FREDERICK ETCHELLS

can stimulate industry." Yet there are schemes to the value of many millions of pounds postponed as a result of the "economy" campaign. These are schemes for which plans exist, and which could be started almost immediately.

With regard to them, we are told that "the policy of the Government is the same as it was before the Conference began." "We anticipate confidently that the work which has been obliged to be postponed will be taken up again as soon as conditions sufficiently alter to enable it to be taken up usefully."

But if this work can ever be "taken up usefully" in the future, it could be taken up more usefully now. What are the conditions which must alter? Construction costs are at their lowest, and the rate of interest is low. As Mr. Keynes has pointed out, either these useful works can be undertaken now, or the rate of interest is too high and should be lowered. In any case, the real test of the Government's intentions with regard to public works lies in the sphere of these postponed schemes. Until they are undertaken the Government's attitude can only be characterized as one of negative restriction accompanied by a callous disregard of the cost in terms of unemployment and virtual pauperisation.

Apart from postponed schemes there are certain long-range projects on which planning, at least, could and should be started immediately. One is the electrification of the main line railways and the construction of adequate roads to serve them.

Here is tremendous scope for work with far-reaching beneficial effects. Another is the regrouping of the population into satellite towns round commercial centres. Most of our towns at present are an incredible hotch-potch of factories, slums, commercial offices, dwelling houses, etc. These should be regrouped into new units round the central hub on the grounds, not only of public health, amenities and efficiency, but also of defence against attack from the air.

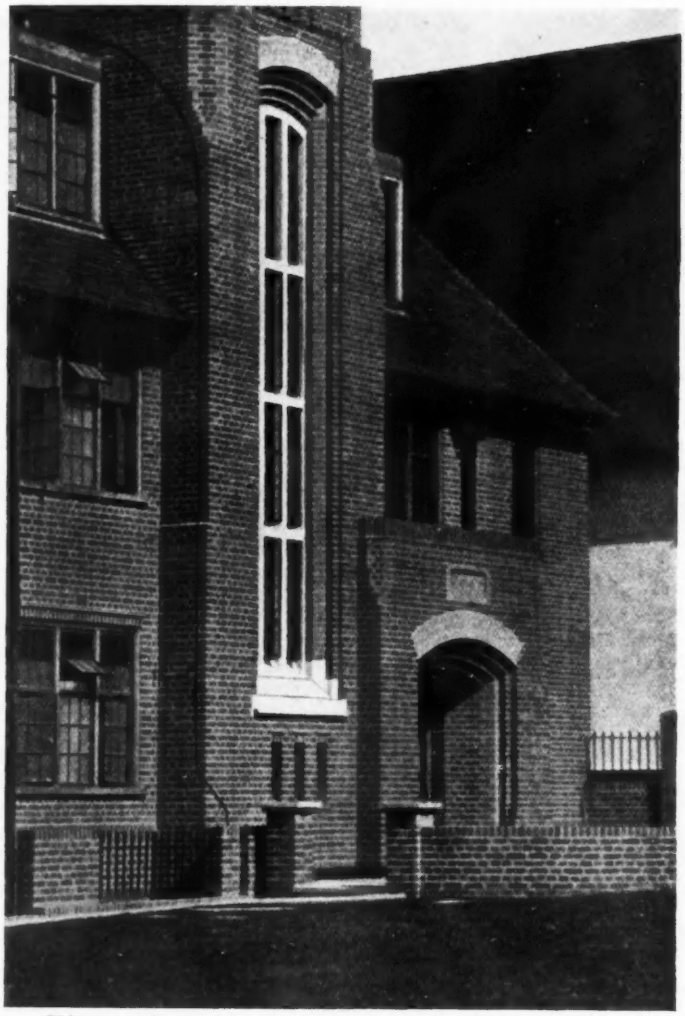
A policy of public works should not be judged by itself *in vacuo*, but in relation to the general economic system. The building and public works industry has more subsidiary industries and is more widespread geographically than any other industry. Further, a greater proportion of the expenditure on public works goes, in one way or another, in the payment of weekly wages than is the case with expenditure in any other industry.

It follows that a stimulus applied through the building and public works industry will spread both more widely and more quickly, and also affect a greater number of industries than a stimulus through any other industry. To quote Sir Arthur Salter, whose impartial authority in such matters must bear great weight, "the building trade is always a key-point in the economic structure, and any improvement *there* would quickly radiate."

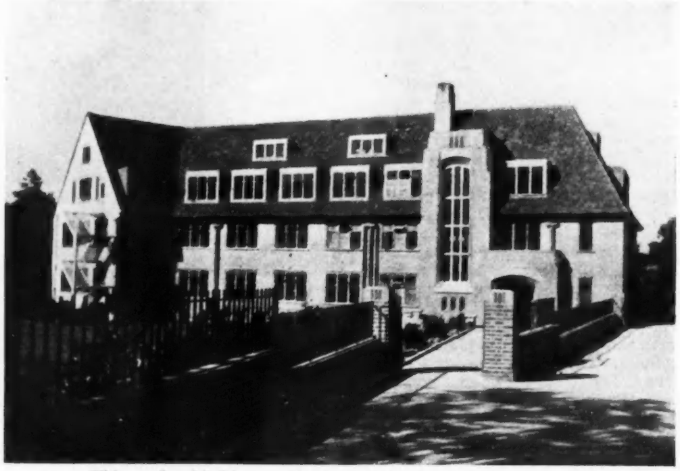
Practically every Member of the Government, from the Prime Minister downward, has declared at some time in favour of a policy calculated to raise wholesale prices. There is no more effective means of implementing this intention than by initiating schemes of public works, for the very simple reasons set out in the preceding paragraph. As the Chancellor of the Exchequer has indicated, a cheap money policy is not enough, and open-market operations are not enough. The demand, not the supply of credit must be created. The best way is by public works. There is no doubt that a vigorous policy of public works would raise the level of activity throughout the entire economic system.

In this connection Sir Raymond Unwin, the President of the Building Industries National Council, will make a survey of the American public works schemes on behalf of the Council during his forthcoming visit to the United States, with special reference to their more widespread and general economic effects.

BUS OFFICES



The main entrance and staircase window.



The building from the south-west.

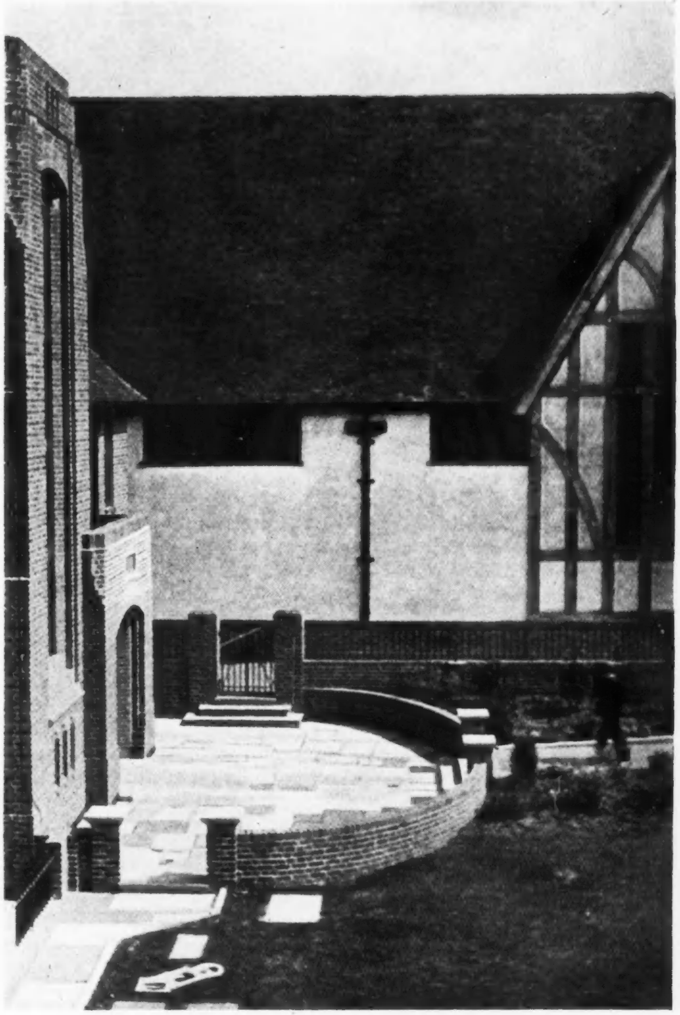
AT REIGATE, SURREY

DESIGNED

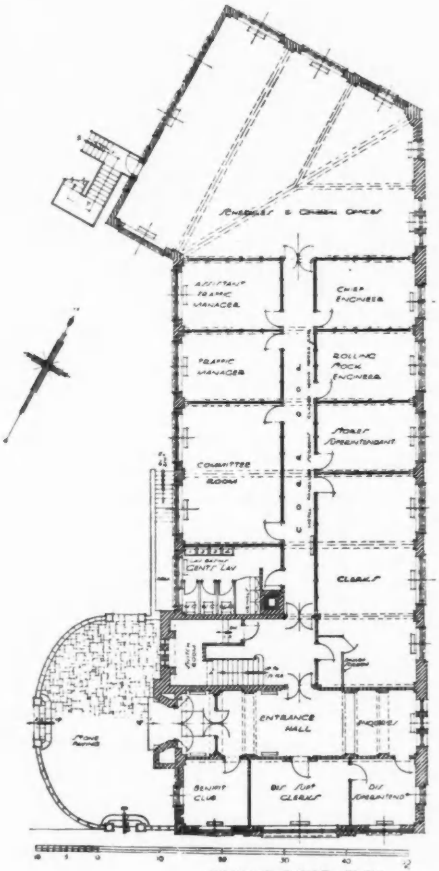
BY

WALLIS, GILBERT

AND PARTNERS



The entrance fore-court.


SCHEDULES & GENERAL OFFICES
ASSISTANT TRAFFIC MANAGER
CHIEF ENGINEER
TRAFFIC MANAGER
ROLLING STOCK ENGINEER
STORES SUPERINTENDANT
COMMITTEE ROOM
CORRIDOR
GENTS LAV
CLERKS
SWITCH ROOM
ENTRANCE HALL
ENQUIRIES
STONE PAVING
BENEFIT CLUB
DIS SUPT CLERKS
DIS SUPERINTEND^T
10 5 0 10 20 30 40

GROUND FLOOR PLAN

This office building, for the London General County Services, Ltd., has been designed to harmonize with the Recreation Grounds close by. It is built in Dorking bricks, with half-timbered gables and a tiled roof. A future extension has been provided for, and the completed scheme will extend round three sides of the courtyard. The interior of the high-pitched roof is to be used to house the record files which are not in daily use.

All the interior partitioning, including that in the large general office and the managing directors' rooms, consists of enamelled pressed steel sectional partitioning, which enables departmental changes to be quickly made. All the joinery is in oak, and the office furniture is in steel. The building is completely equipped with internal telephones and electric clocks.

THE MOYNE REPORT

FILLING THE GAP IN THE GOVERNMENT'S HOUSING POLICY

[*In last week's issue we gave extracts from the passages in the Report of the Departmental Committee on Housing in which the committee gave their reasons for rejecting Sir Raymond Unwin's proposal for a National Housing Board. This week, since the Report deals with matters that closely concern the architect, we give a general summary; the most important clauses in the committee's recommendations being printed in italics.*—ED., *A.J.*]

WE have carefully refrained from making any recommendations which would impede the slum clearance programmes of Local Authorities or the return of private builders and investors to the provision of working class houses.

Questions of slum clearance are outside our terms of reference, but, in considering and formulating proposals in regard to that part of the housing problem with which we are concerned, we have tried not to lose sight of the whole. We agree with the view that the first essential task is to clear the slums; we have made no proposals which would afford Local Authorities any excuse to slacken or reduce their efforts in this direction: and we have made it clear that we are definitely opposed to the policy of reconditioning as a cheap alternative to demolition and replacement. Apart, however, from the dwellers in the so-called slums, which are to be demolished, large numbers of the poorer classes are today living in conditions which ought not to be tolerated. *They are living in decaying houses which are badly managed, inadequately repaired and often grossly overcrowded, and it is to methods of helping these people that we have primarily turned our attention.* Large tracts of this property are to be found, especially in the larger centres of population, and call urgently for treatment on new and bolder lines. We think that there is here a gap in the Government's housing policy, and our proposals are intended to fill it.

It is abundantly clear that the existing law is adequate, if enforced, to compel landlords of working class properties to keep them in all respects fit for human habitation. In some districts the law is adequately enforced, but in many it is not. The principal reasons for this failure in administration are local apathy, the influence of property owners on some Local Authorities, the shortage of local staffs, the existence of a number of poor owners whom some Local Authorities are reluctant to press, the hampering effects on management of the Rent Restrictions Acts, and the economic effect of the housing shortage in enabling landlords to curtail their expenditure on repairs without endangering their rents.

Whatever be the causes, the discreditable result remains. Commissions and Committees have inquired and reported and the law has been from time to time amended and strengthened, but its administration remains defective. But even if the law were to be fully enforced, the remedy would, in our opinion, in many cases come too late. There has grown up in too many districts a bad tradition between landlord and tenant of this class of property. That tradition can, we think, only be cured by improved and enlightened management and we see no practical way of securing this on a sufficiently large scale except by the acquisition of the properties. That management lies at the root of the problem is no new doctrine; it was preached and practised some 70 years ago by Octavia Hill, and the essential soundness of her views has been proved by the successful practice of her methods by an increasing number of public authorities, private persons and Public Utility Societies.

We propose an extension on a large scale of the work of these societies. We have recommended the appointment of a strong Central Public Utility Council to promote and supervise the societies and to advise and make recommendations to the Minister in regard to proposals for the acquisition, reconditioning and management of working class properties which are not kept by their owners in all respects fit for human habitation.

We propose that every owner of working class property which is not in all respects fit for human habitation shall be made liable at law to expropriation on a new basis of compensation. At the same time we desire to give every encouragement to those owners who are willing and able themselves to put their houses in order, and with this object we have made two important recommendations. We propose that private owners should be given the statutory right to submit to the Minister voluntary clearance or improvement schemes (except in regard to properties included in the five-year clearance programmes of the Local Authorities); and we propose also that Local Authorities should be empowered to give a licence to any owner who has reconditioned his house to their satisfaction, exempting the house for a fixed period from liability to clearance or demolition without full compensation. It will be appreciated, however, that his obligation to maintain the property in a good state during the licensed period will remain undiminished. It will be open to any owner to claim exemption from expropriation on the proposed new basis of compensation if he shows that the property has been made in all respects fit by the material date, which will be the date of inspection, or that the property is included in a voluntary clearance or improvement scheme which he has already submitted to the Minister.

The proposed new basis of compensation is not confiscatory.

We propose that the dispossessed owners *should be paid what they themselves paid for the property*, or the value accepted for death duties if they inherited it, or the value adopted for stamp duty if they acquired it by deed of gift. That is to say, the consideration disclosed on the latest transaction prior to the date of our Report should be taken as the compensation to be paid. In other words, we should give them back their money.

We appreciate that the plan could not unfairly be described as rough justice and we realize that anomalies will arise as between different owners, but we are satisfied that as between the owners and the community the plan would be fair and reasonable and would err, if at all, on the side of generosity to the owners.

We propose that the compulsory powers of purchase should be conferred on the Local Authorities, but, in view of the expressed reluctance of the urban authorities to hold and manage inferior property, we contemplate that in many districts the *powers will be exercised on the initiative of and on behalf of approved Public Utility Societies*, which are at present in existence or will be brought into existence to meet the need for their services. Such societies should work in close co-operation with the Local Authorities, who will be asked to exercise the compulsory powers on their behalf; and, *if the Local Authority should decline to act, it is proposed to empower the Minister to confer on the society the compulsory powers of the authority.* Where no suitable approved society exists or can readily be formed, the properties should be vested in House Management Commissioners appointed by the Local Authorty. Where neither of these alternatives is practicable, the Local Authority should be empowered to repair, hold and manage the properties themselves.

We think that in rural districts the facilities provided by the Housing (Rural Workers) Acts should be made more widely known, and that the Authorities administering the Acts should be stimulated to greater activity. It seems to us, however, that so long as the initiative of application rests with the private owner, no large or rapid improvement in the position can be expected. However willing an Authority may be to grant the facilities, it is difficult to induce many owners to make application. We have, therefore, recommended that the Authorities should be empowered to acquire, on the refund basis of compensation, properties which are suitable for treatment under the Acts, recondition them themselves, and draw the State subsidy which is at present payable under the Acts.

We recognize that it may be that some Authorities may still fail to administer actively the new powers, but in any such district it will under our proposals be open to any group of persons, who are concerned to bring about an improvement, to form themselves into a Public Utility Society and apply to the Minister for the facilities which we have recommended for such Societies.

We have devised a financial scheme on a careful basis which will, we think, without serious risk to the Government ensure adequate capital facilities to the Public Utility Societies, who, however, will be encouraged and to some extent required to find a proportion of the necessary funds themselves. *We propose that a rehousing grant should be available in urban areas to enable Public Utility Societies or Local Authorities to undertake new building to abate overcrowding in the acquired houses.* In rural areas the overcrowding in the acquired houses should normally be dealt with by the addition of rooms as part of the work of reconditioning.

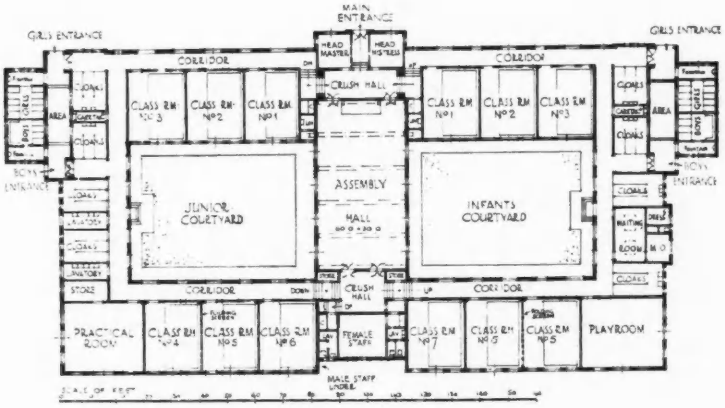
Such is the plan in bare outline. We appreciate that if adopted it will be far reaching in its effects. The ownership of property involves duties as well as rights. Against that large body of owners who realize their obligations our proposals are not directed. But we aim at the elimination of all owners who have proved themselves unwilling or unable to discharge the obligations of ownership, and who have continually evaded both the spirit and the letter of the law.

If, as we believe, the public conscience is alive to the necessity of drastic action and is prepared to support it, we think that our proposals will provide a just, quick and practicable means of securing a comprehensive improvement in the health and housing conditions of the working classes.

SCHOOL AT SCARBOROUGH

Hindlewell Council School, Scarborough, stands on a site of approximately 3¼ acres. The Juniors' and Infants' blocks, each accommodating 350, have already been completed on the central portion of the site with the main entrance facing north, giving a south aspect to all the classrooms; and the erection of a nursery block to the north of the site will complete the scheme. The rest of the site has been laid out as gardens and playing fields; the enclosed courtyards are available for open-air classes.

The walls are faced with Nottingham bricks with York stone dressings. The roofs are covered with grey slates. The floors of classrooms, assembly hall, staff rooms and corridors are laid with oak blocks, and the cloakrooms, etc., with concrete. Electricity is used throughout the building for heating, lighting, water-heating, vacuum cleaning and control of synchronized clocks. The total cost, excluding furniture, was £20,602, which is approximately equivalent to £29 8s. 6d. per scholar.


MAIN ENTRANCE
GIRLS ENTRANCE
GIRLS ENTRANCE
HEAD MASTER
HEAD MISTRESS
CORRIDOR
CORRIDOR
CRUSH HALL
CLASS RM No 3
CLASS RM No 2
CLASS RM No 1
CLASS RM No 1
CLASS RM No 2
CLASS RM No 3
CLOAKS
CARETAKER
CLOAKS
AREA
GIRLS
BOYS
AREA
CLOAKS
CARETAKER
CLOAKS
GIRLS
BOYS
BOYS ENTRANCE
BOYS ENTRANCE
ASSEMBLY HALL
JUNIOR COURTYARD
INFANTS COURTYARD
CLOAKS
LAVATORY
CLOAKS
LAVATORY
STORE
CLOAKS
WAITING ROOM
DRESS
M O
CLOAKS
CORRIDOR
CORRIDOR
DOWN
UP
STORE
STORE
CRUSH HALL
PRACTICAL ROOM
CLASS RM No 4
FOLDING SCREEN
CLASS RM No 5
CLASS RM No 6
FEMALE STAFF
LAV
LAV
CLASS RM No 7
CLASS RM No 5
FOLDING SCREEN
CLASS RM No 5
PLAYROOM
MALE STAFF UNDER
SCALE OF FEET

BY H. CLIFFORD HOLLIS AND F. J. AMOTT

THE SKETCH CLUB

SIXTY-FIFTH SESSION

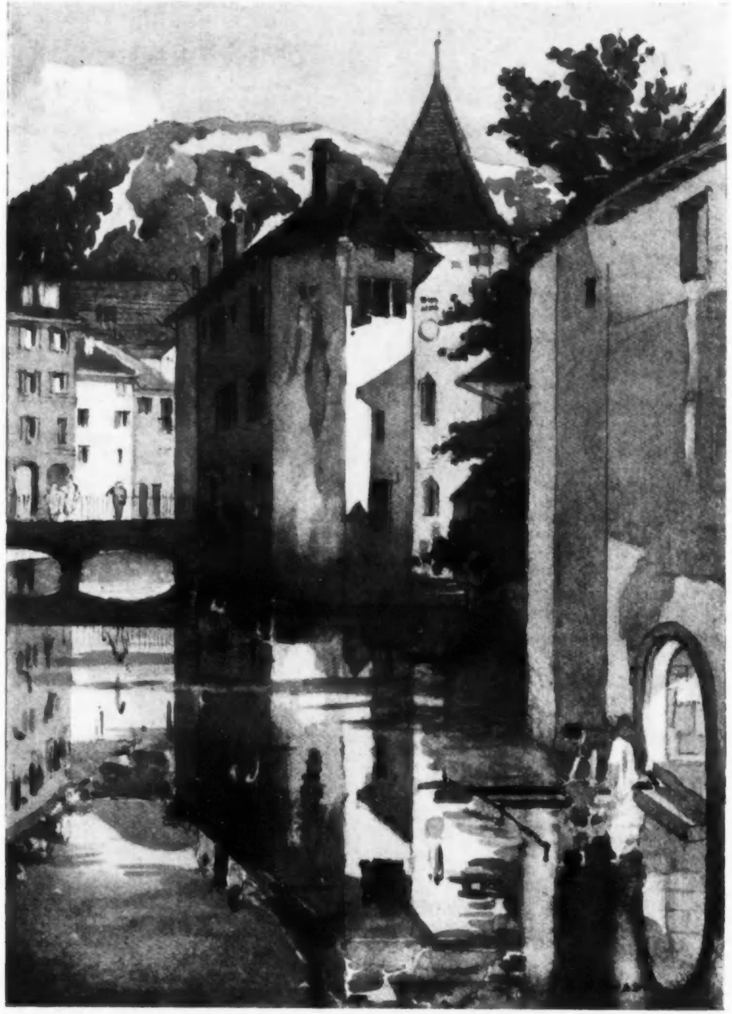
1 *Anneçy, Haute Savoie, France. By R. Mervyn Noad. (Watercolour.)*

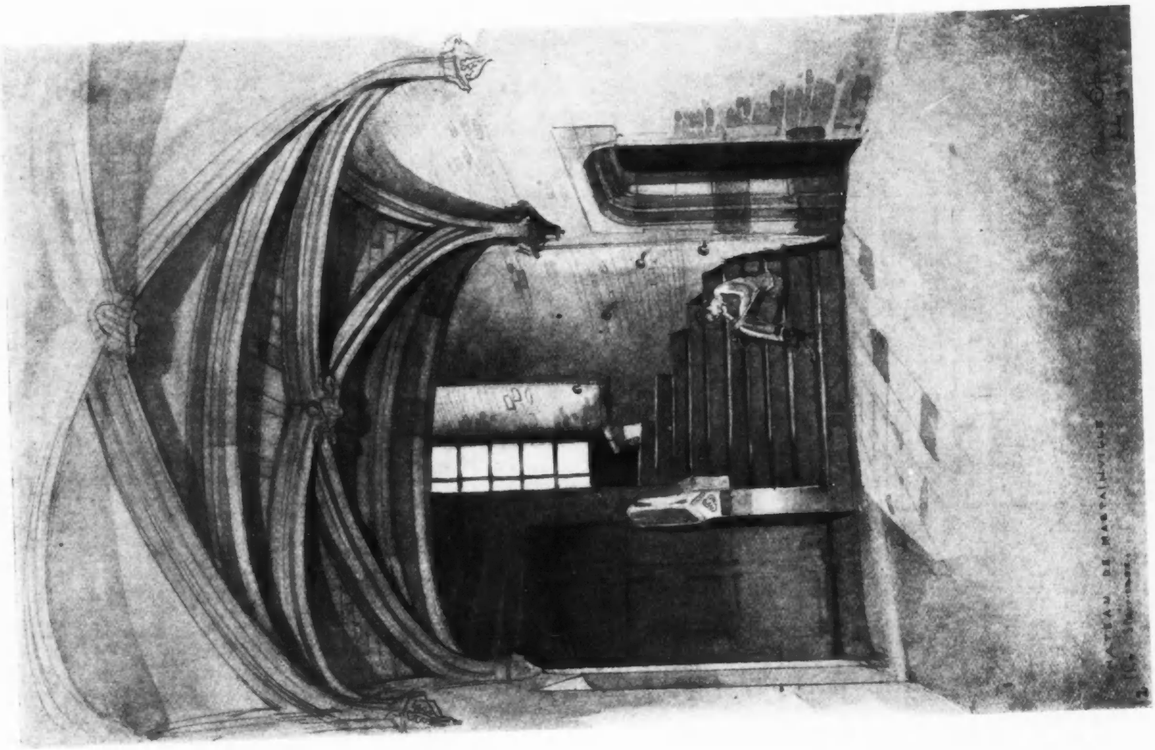
2 *Interior of King's College Chapel, Cambridge. By Alan Reiach. (Pencil.)*

3 *Château de Martainville. The Staircase. By Basil Spence. (Line and wash.)*

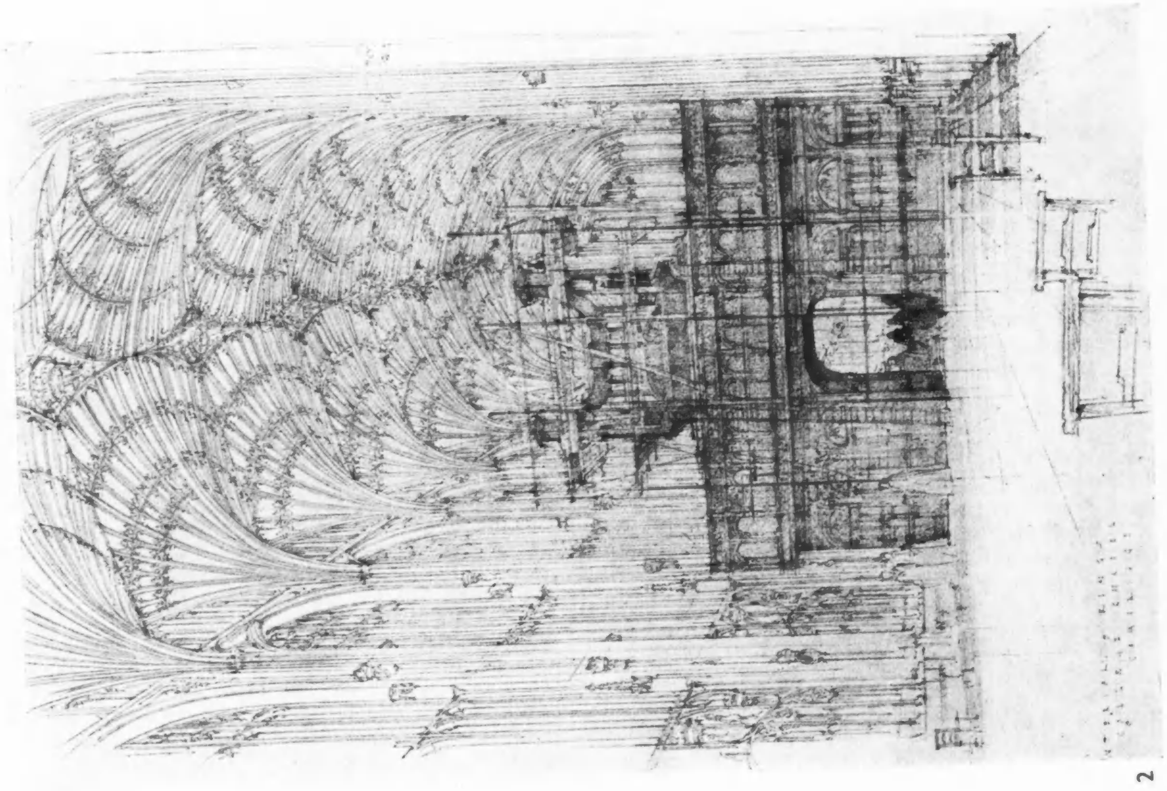
The sketches on this and the facing page are reproduced by courtesy of the Editor of THE QUARTERLY ILLUSTRATED *of the Royal Incorporation of Architects in Scotland.*

1




CHATEAU DE MARTAINVILLE

3



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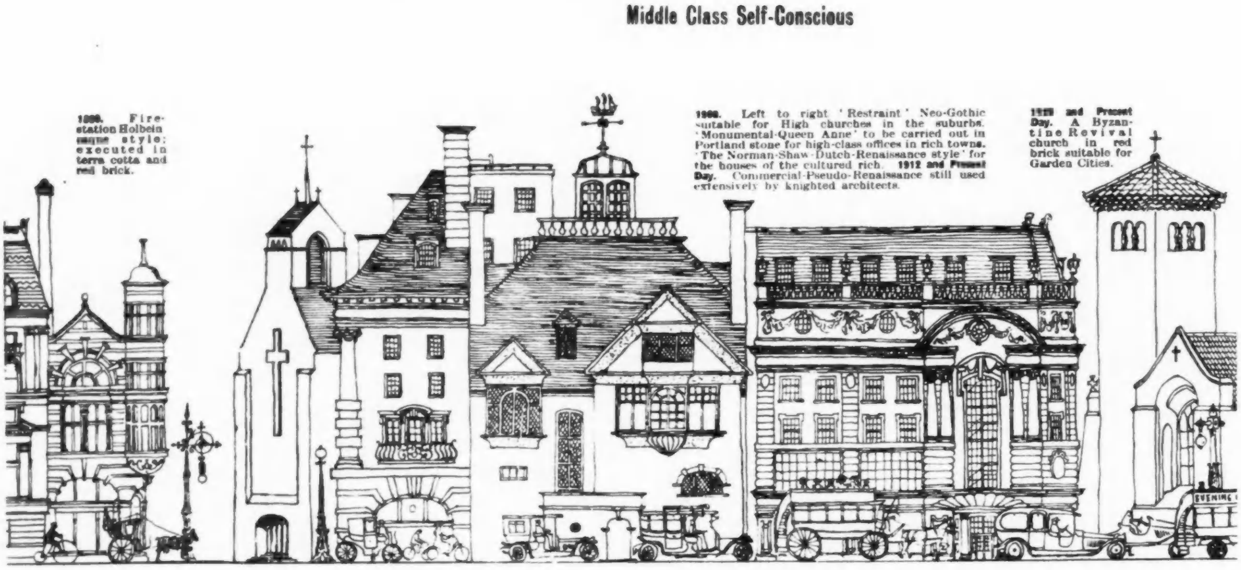

Middle Class Self-Conscious
[illegible] Fire-station Holbeinesque style; executed in terra cotta and red brick.
[illegible] Left to right 'Restraint' Neo-Gothic suitable for High churches in the suburbs. 'Monumental-Queen Anne' to be carried out in Portland stone for high-class offices in rich towns. 'The Norman-Shaw-Dutch-Renaissance style' for the houses of the cultured rich. 1912 and Present Day. Commercial-Pseudo-Renaissance still used extensively by knighted architects.
[illegible] and Present Day. A Byzantine Revival church in red brick suitable for Garden Cities.
EVENING

The latter part of the illustration entitled the "Street

LITERATURE

DEMOCRACY IN DISTRESS

[By. J. M. Richards]

Ghastly Good Taste. By John Betjeman. London: Chapman & Hall. Price 5s. net.

MATTHEW ARNOLD in *Culture and Anarchy* divides us all into three categories: Barbarians, Philistines and Populace. Already, when that work was written, he was able to recognize symptoms of the transference of leadership from the first category (the landed aristocracy) to the second (the growing middle class), and of the increasing influence of the third.

It is a long stride from Matthew Arnold's urbane scholasticism to Mr. John Betjeman's thinly-disguised asceticism, but the story they have to tell is the same. It is of *Sweetness and Light* befouled by middle-class materialism. "I see a wave," Arnold wrote in 1848, "of more than American vulgarity, moral, intellectual and social, preparing to break over us." The wave broke; and even now in 1933 we are still struggling to keep our heads above water.

English architecture, with the social order that it symbolized, was overwhelmed by that wave. In this book, with lively example and sensitive observation, the circumstances are faithfully described; from the beginnings of self-consciousness under the Stuarts to the accretion of wealth in the hands of the irresponsible during the nineteenth century and beyond. The book tells, in fact, as the cover announces, *a depressing story of the rise and fall of English architecture*; and tells it in the only way that can give architecture its real significance—by studying it as a reflector of social change.

It has a provocative title and a pretty cover in strawberry-pink and blue, which displays an enchanting selection of Victorian type-faces; but let not the public suppose from its appearance that it is fitted merely to be left about the room (alongside the *New Yorker*) to amuse the sophisticated. The railway trains on the outside are charming, and so is the *beautiful folding illustration forty inches long specially drawn by Mr. Peter Fleetwood-Hesketh*; but, though flippant in presentation, it is in intention, as its moral requires it to be, a serious book—very serious indeed. It is also a sensible book, in the most particular meaning of the word. Mr. Betjeman appreciates the attitude of the past, less because it was not the attitude of the present, than because it was capable of producing the better results. He is angry about the English manufacturing town, not because he thinks it has no right to exist, but because it has not been allowed to exist naturally and beautifully, and his chief enemy is the cautious acadamician with his false scholarship and portentious airs rather than the well-meaning but uninstructed Philistine.

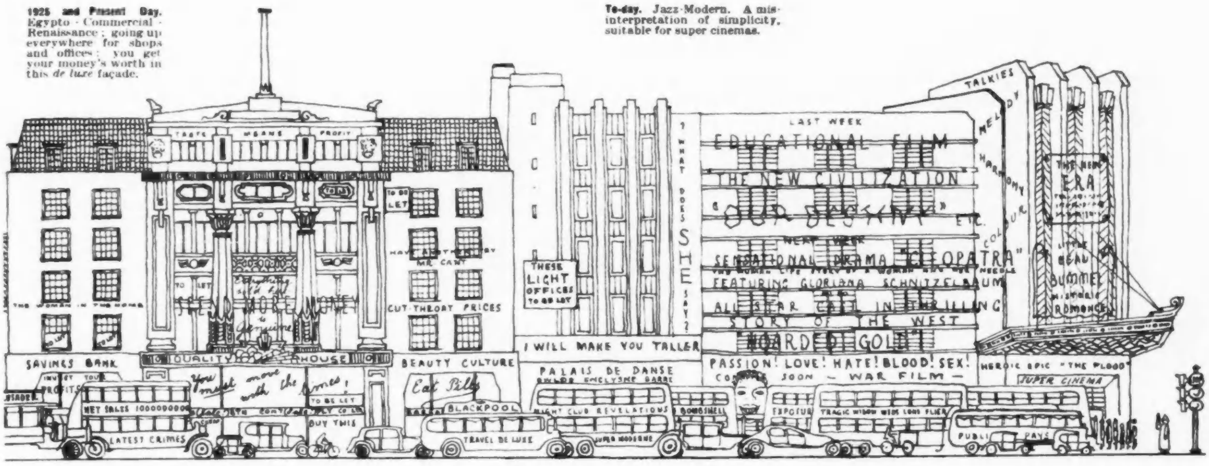
If we accept the Spenglerian distinction between a culture and a civilization; the one spontaneously expressive and coincident with spiritual growth, and the other self-consciously adorning a period of material prosperity, we find that culture in England declined into mere civilization at the end of the sixteenth century. That is the point at which this study begins; and Mr. Betjeman amply explains the second flowering of English architecture, after the period of self-consciousness had begun, by introducing, between the spontaneous and the eclectic, a new period: the state-conscious.

This period culminated in the splendour of the Regency, when genuine good taste was fostered by educated patronage with a sense of civic responsibility. It gradually gave way, in the nineteenth century, to the ghastly good taste of the connoisseur that was fostered only by desire for personal aggrandisement, and was representative of an era when material success, together with sobriety and chastity (or the appearance of it) were the cardinal virtues.

He concludes, after quietly demonstrating the even greater mental dishonesty of contemporary pseudo-modernity, by offering hope for the future only in the inspiration of another Christendom. What form that Christendom will take he naturally does not prophesy, except for a hint that it may not be based on capitalism. A revival of state-consciousness will have to be the first step.

I have said that this book's flippant exterior belies the seriousness of its purpose; but, in concentrating on that serious purpose, I have hardly done justice to the quality of Mr. Betjeman's writing. His own taste and his wide range of reference, as well as the aptness

Big Business and Chaos


TASTE MEANS PROFIT
TO BE LET
HAVE ANOTHER TRY MR. CANT
THE WOMAN IN THE HOME
TO LET
MORE MONEY
CUT-THROAT PRICES
SAVINGS BANK
INVEST YOUR PROFITS
QUALITY HOUSE
You must move with the times!
TO BE LET
BEAUTY CULTURE
Eat Pills
BLACKPOOL
NET SALES 1000000000
BUY THIS
LATEST CRIMES
TRAVEL DE LUXE
THESE LIGHT OFFICES TO BE LET
I WILL MAKE YOU TALLER
WHAT DOES SHE SAY?
PALAIS DE DANSE
NIGHT CLUB REVELATIONS
BOMBSHELL
SUPER MODERNE
LAST WEEK
EDUCATIONAL FILM
THE NEW CIVILIZATION
"OUR DESTINY" ETC.
NEXT WEEK
SENSATIONAL DRAMA "CLEOPATRA"
FEATURING GLORIANA SCHNITZELBAUM
ALL STAR CAST IN THRILLING
STORY OF THE WEST
"HOARDED GOLD"
PASSION! LOVE! HATE! BLOOD! SEX!
COMING SOON — WAR FILM —
EXPOSURE
TRAGIC WIDOW WEDS LONE FLIER
TALKIES
MELODY
HARMONY
COLOUR
THE NEW ERA
LITTLE BEAU BUMMEL
HISTORIC ROMANCE
HEROIC EPIC "THE FLOOD"
SUPER CINEMA
PUBLICITY PAYS

1925 and Present Day. Egypto - Commercial - Renaissance; going up everywhere for shops and offices: you get your money's worth in this *de luxe* façade.

To-day. Jazz-Modern. A misinterpretation of simplicity, suitable for super cinemas.

of Taste, or the March of English Art down the Ages"

from GHASTLY GOOD TASTE, *reviewed on this page*

of his prose, give to his story a peculiar inevitability. He never falls into that error, common among architectural writers, of examining the result with insufficient reference to the cause; and he is able to give frankly personal opinions without limiting the general application of the principles they support. That, perhaps, is the most pleasing characteristic of the book: he pursues his path in the most apparently inconsequential manner, here attacking the antiquarian ecclesiastic or the professional snobbery of the "refeened" architect and there defending the traditional English Sunday, yet the cumulative effect is one of admirable unity as convincing as the most closely reasoned argument.

Of numerous passages that could be selected for more detailed admiration these must certainly be mentioned: Some letters from Mr. Batty Langley, architect, who longs to persuade his patron to abandon dignified classic in favour of the fashionable *Gothick Fandango;* the acute observations that immediately follow on the absence of a *Rococo* element from the so-called "debased" period of English architectural styles; and the entirely delightful chapter devoted to the spacious days of the Regency.

The author's personal approach to his subject, besides increasing the charm of the book, gives it its importance as a contribution to architectural enlightenment. Architecture, looked at as Mr. Betjeman looks at it, becomes for everyone a personal issue. Bad architecture becomes a thing that the average man minds about (for Mr. Betjeman deplores the insensitiveness to ugliness that the average man has had in self-defence to acquire) just as he minds about bad drainage or bad weather; but, unlike the latter, it is not beyond his power to put it right.

As the first step in combating the monumental perversity from which architecture suffers, he relates it once more to the human being from whose ambitions it is derived.

QUESTIONS THAT ARISE

Wood Lice

¶ M. C. K. writes: "*I was architect for a house erected in Edinburgh in 1929. My client writes to me now asking if I can suggest the cause and remedy for a plague of what are described as 'Wood Lice.' These are very tiny animals, light in colour and very quick in movement, running sometimes in a straight line and often in a circle. They do not bore into the wood but live in joints, and have overrun all the woodwork in the house, and also the furniture. It has been suggested that they were in the new woodwork, which is Redwood. My client has tried smoking them with sulphur and also formaldihyde, but without much success.*"

The insects present in the house referred to by your correspondent are probably Book-lice (*Atropos divinatoria*). *Atropos* is one of the commonest of household pests and is extremely difficult to eradicate. They do not attack wood and their food apparently consists of moulds, starchy substances such as wallpaper paste, etc., and such nutritious substances as they can find in accumulations of dust. The amount of damage they do is infinitesimal, and of no importance, but their presence in numbers is often a cause of unnecessary worry. These insects are frequently found in numbers upon furniture, and have therefore been thought to originate from the wood, but as it is only on smooth, dark surfaces that *Atropos* can be seen easily, it is obvious that a greater proportion will be noticed on the surface of polished furniture, etc.

As mentioned above, control of the insects is extremely difficult, if not impossible. Sulphur dioxide fumigation is often recommended, but is of doubtful value as the gas does not penetrate well into the cracks and crevices in which the insects shelter. The rooms should be kept as dry and as light as possible. In attics or other rooms where the characteristic odour of paradichlorbenzene (rather like naphthalene) is not of importance this substance may be powdered and sprinkled over the floor, under carpets, in wardrobes, etc. Paradichlorbenzene should be obtainable through most chemists.

E. A. PARKIN
(Entomology Section, FOREST PRODUCTS RESEARCH LABORATORY)

LAW REPORTS

ARCHITECT'S FEES—ABANDONED SCHEME

Thomas v. *Headley and Others—King's Bench Division. Before Mr. Justice Swift*

THIS was an action by Sir Brumwell Thomas, F.R.I.B.A., of F3 Albany, Piccadilly, against Lord Headley, the Aga Khan, and others, trustees of the London Nizamish

Mosque Trust, claiming £10,200 as fees in connection with a scheme for building a Muslim Mosque in West Kensington, a scheme which was abandoned after a site had been acquired. The claim as to £6,800 represented 4 per cent. of the £170,000 which the buildings were to have cost and £3,400 which plaintiff said was due to the quantity surveyor for his fees.

The case for the plaintiff was that on November 20, 1931, by resolution passed at a meeting of the trustees, he was appointed architect to carry out work in consultation with the architect to the Nizam of Hyderabad, on the scale of charges of the Royal Institute of British Architects. The architectural work was in connection with the erection of a mosque, with minaret, library, lecture hall and hostel for the residence of the staff and other members. Plaintiff said he prepared and submitted a design which was approved by the trustees, but by letter dated December 5, 1932, the project was abandoned and his fees had not been paid.

By their defence the defendants denied that the plaintiff's design was settled or approved on their behalf, and alternatively pleaded that Lord Headley had no authority to approve it. They further said it was a condition precedent to any liability on their part that the design should be approved by them and they had not approved it. They also set up that the plaintiff suggested that he should prepare the design on the understanding that when the defendants were in a position to proceed with the work, the plaintiff should carry it out, and that if for any reason the work was not proceeded with, he should receive an honorarium for the work done by him.

Mr. Croom-Johnson, K.C., and Mr. Blanco White appeared for the plaintiff, and Sir Wm. Greaves Lord, K.C., and Sir Geo. Jones for the defendants.

Mr. Croom-Johnson, after dealing with the defences set up by the defendants, said his client in due course, in accordance with his duty and implied authority, engaged a quantity surveyor to get out quantities so that he might put matters in such a shape that tenders could be obtained when the defendants were ready for them. The quantity surveyor was not a party to the action and the only relief the plaintiff could get in these proceedings was a declaration that he was, in the circumstances of the case, authorized, either expressly or impliedly, to engage the quantity surveyor.

Counsel went on to say that a copy of the scale of remuneration authorized by the R.I.B.A. was given to most of the trustees, if not to all, and his client was expressly appointed architect on the terms of that scale. Had the scheme been proceeded with plaintiff would have been entitled to 6 per cent. on the estimated cost of the works, but as the scheme had been abandoned, his claim was limited to 4 per cent. of the £170,000.

Proceeding, counsel said it was about 1928 that the members of the Muslim community conceived the idea of building a mosque in London, the Nizam of Hyderabad providing about £60,000 as a nucleus for the scheme. Trustees were duly appointed and in July, 1929, a site was acquired near West Kensington station at a cost of about £29,000. Lord Headley was chairman of the Board of Trustees and the Aga Khan was a member. It was in 1930 that Lord Headley approached plaintiff in connection with the scheme, being given in outline what the mosque was to be like. The dome was to be of the same type and of the same large dimensions as that of the dome of the Taj Mahal. There were to be other buildings, including a courtyard. An appeal was to be made to the Muslim world for funds. In November, 1930, the first Indian Round Table conference was held and the Muslim delegates were shown the plans of the buildings which plaintiff had prepared and in November, 1931, they were formally submitted and approved at a meeting of the trustees. Part of the plaintiff's case was that there was never any sort of suggestion that he was not to be the architect, nor that he was to do nothing but to prepare designs and submit them to the trustees.

Sir Wm. Greaves Lord said the trustees had never disputed that the plaintiff was entitled to be paid a reasonably substantial sum for his work, but in insisting on his construction of the contract, they felt he was going too far.

His lordship said the parties were so close together that it was a pity that they should thrash out their differences in public.

Long negotiations followed and ultimately the parties arrived at a settlement.

Sir Wm. Greaves Lord announced that a settlement in terms which had been revealed to his lordship, had been agreed to and it was not necessary to mention them in detail.

Mr. Croom-Johnson said the result of the agreement was that the scheme which, for the purposes of the action, was being dealt with on the basis that it was an abandoned scheme, had been dealt with, for the purpose of the settlement, on the basis that it was not an abandoned scheme, and that would probably be a satisfaction to both the architect who had prepared the plans, and to the trustees on whose behalf the plans were prepared. He asked that the proceedings should be stayed on the terms which had been signed, the money paid into court would be paid out to plaintiff's solicitors, and an order made for the taxation of the plaintiff's costs. There would be a judgment order if necessary.

His lordship thought the settlement a very proper one and one which was a very creditable one to both sides. Plaintiff had clearly established the fact that he was the duly appointed architect of the Trust and the defendants had acknowledged that, and given him assurance as to the future. He, therefore, approved the settlement.

OUR SECRETARIES

• 9 •

H. H. GOODALL

NOTTINGHAM, DERBY AND LINCOLN ARCHITECTURAL SOCIETY

MR. H. H. GOODALL was born in Nottingham in 1877. He studied architecture in the office of his father, the late A. Harrison Goodall; and at the Nottingham School of Art, where he won the Dutton-Walker Scholarship and two bronze medals.

He began to practice on his own account in 1902, and was elected a Licentiate of the R.I.B.A. in 1911.

He gave up practice in 1911 and emigrated to British Columbia, where he was engaged in fruit ranching, trapping, etc., in the Kootenay Lake district. He served in France from 1914 till 1918 and held a commission in the Canadian Engineers.

At the end of the war Mr. Goodall resumed practice in Nottingham, and has carried out estate development, domestic, industrial and other work.

He became Hon. Secretary of the Nottingham, Derby and Lincoln Architectural Society in 1923.

EXCAVATIONS: ALLEGED NEGLIGENCE

Bobby v. Holland & Hannen and Cubitts, Ltd., and Grant Bros., Ltd.—Official Referees' Court. Before Mr. S. R. C. Bosanquet, K.C.

THIS was an action by Mr. H. W. F. Bobby, lessee and licensee of the Royal Oak Public House, Surrey Street, Croydon, against Holland & Hannen and Cubitts, Ltd., builders and contractors, and Grant Bros., Ltd., drapers, of Croydon, for damages in respect of injury done to the Royal Oak by the rebuilding of Grant Bros.' premises, while in a third-party action each of the defendants, whilst denying negligence, claimed to be indemnified by the other.

Mr. Bobby's case was that the builders in excavating for the new building of Grant Bros. had removed the support of the Royal Oak, with the result that its walls had subsided and cracked, and ceilings had cracked, with the result that the premises had become uninhabitable.

It was also alleged that the builders in a private passage between the two premises had made fires, with the result that the decorations and furniture of the lounge were spoilt, and the plaintiff and his staff had been compelled to remove from the premises. Plaintiff claimed £617 to cover repairs to the building, apart from various other heads of claim.

Messrs. Grant Bros. denied loss and

damage, and pleaded that the builders were engaged as independent contractors.

Messrs. Holland & Hannen and Cubitts denied damage, and, while denying all liability, brought nto Court £60 as sufficient to satisfy the plaintiiff's claim.

Mr. Morris, for the plaintiff, said Messrs. Grant had erected a fine new building, and the claim was for damage to the Royal Oak caused by the removal of lateral support and the way in which the building operations were carried out. The new store of defendants' was a tall building, and the contractors had to excavate to a considerable extent. Under the contract the builders were required to take full responsibility for the stability of adjoining premises and were to be held liable for any damage done.

Mr. Henry Berner, an architect, of High Street, Croydon, giving evidence for the plaintiff, said he found that a considerable movement had taken place in the plaintiff's building, chiefly in the parapet along the Surrey Street front of the premises. There was a bad crack in the ground floor crossing wall and in the ceilings generally. He believed the whole building had, so to speak, broken its back. The foundations were perfectly satisfactory until they were disturbed.

Cross-examined, witness admitted that some of the cracks were old, but said they had recently opened.

Mr. A. J. Rennard, quantity surveyor, of Victoria Street, S.W., said he had examined the Royal Oak after the completion of the building operations and found the saloon lounge and buffet bar in a disgusting state as the result of smoke. The cracks in the walls were due to subsidence.

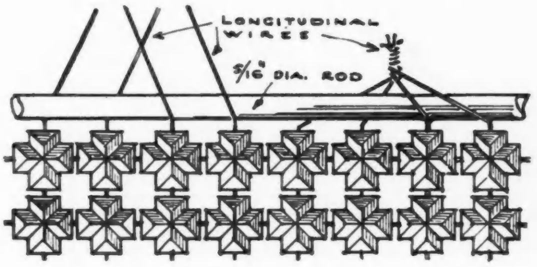
Mr. W. W. Palin, of the Gable Building Co., Brighton Road, South Croydon, said his firm had carried out the repairs to the Royal Oak after the completion of the building operations. The work, which did not include any underpinning, occupied about five weeks and the charges amounted to £404. Even now cracks were appearing all over the place.

Mr. Hugh Macintosh, architect and surveyor, of Croydon and Westminster, said the sub-soil in that part of Croydon was merely a river gravel. It was an old river bed and the sub-soil was loose and full of water. The basement of the defendants' new building was 13 ft. 6 ins. below the floor of the Royal Oak, and therefore, before the excavations commenced the Royal Oak should have been shored up and supported, particularly having regard to the age and character of the building. There was a distinct risk of further subsidence judging by the various indications. The building was moving today.

Mr. Rimmer, in opening the case for Holland & Hannen and Cubitts, said he did not deny that there had been some slight subsidence, but now that the wall was firmly supported by Grant Bros.' wall there would be no further subsidence. His clients were very experienced builders and well qualified to deal with such work as this. What they complained of was that plaintiff was not only seeking to make them pay for the damage done as the result of the slight subsidence, but to carry out for him the normal and expected dilapidations which had accrued during his tenancy.

The Official Referee gave judgment for the plaintiff against both defendants for £303 11s. 9d., being as to £137 for underpinning, £110 for repairs, and £46 for loss of use of rooms, etc. He also gave judgment against the builders only for £55 damage to the lounge, etc., due to smoke. The total judgment for plaintiff was therefore £358 odd.

Later the Official Referee on the point as to indemnity found in favour of Grant Bros. against the builders and held that the indemnity in the contract governed the work which caused the damage. He granted a stay of execution with a view to an appeal.



TRADE NOTES

[BY F. R. S. YORKE, A.R.I.B.A.]

2-in. Partitioning

BRICANION lathing, by no means a new material, even in this country, and used widely on the Continent for many years, is, I understand, being employed extensively at the present time for the construction of 2-in. partitions.

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It is composed of a mesh of No. 19 S.W.G. mild steel wire covered by small brick clay crosses, applied under high pressure and baked at a temperature of 900 deg. C.

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During the baking process the wire becomes coated with a film of oxide which is particularly valuable, since it counteracts subsequent tendencies for the metal to corrode under the action of the plaster.

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The partition for general purposes is constructed from a single layer of Bricanion, reinforced horizontally and vertically with $\frac{5}{16}$ in. rods at 20 ins. centres, and plastered on both sides to give a partition of 2 ins. total thickness. A partition of this type is reasonably resistant to the passage of sound, having, I am told, an insulating effect higher than that of 2¾ ins. breeze slab or 3 ins. hollow block. Furthermore, it is fire-resistant and vermin-proof.

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In spite of its thinness, a quality which makes for economies in weight and space, the 2-in. partition has considerable strength, and Bricanion has been carried to a height of 24 ft. without sign of distortion. It weighs only 16 lb. per square foot and no special beam is needed to support it.

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If in certain work the insulating capacity of a 2-in. partition is not considered sufficient, then two skins of the lathing may be erected to a minimum thickness of 1 in. to 1½ ins. apart, against rods and spacers, to produce, with plaster, a 3 ins. to 3½ ins. thick hollow partition.

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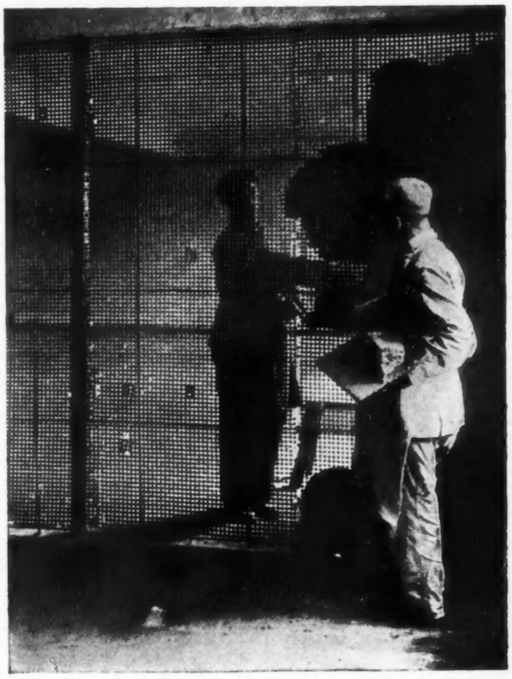
If light T irons are used in place of rods, greater rigidity is obtained, and spacers,



Plastering a 2-in. Bricanion partition.

which may transmit sound through the partition, from shell to shell, are not needed.

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Door frames should be fixed before the partition is erected. Shrinkage of the frame will not cause cracking as there is no necessity to continue the door-posts up to the ceiling. If a new opening is required in an existing Bricanion partition, the aperture can be cut with a sharp cold chisel and wire cutters—no shoring being necessary.

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Bricanion may be used for exterior walls (where bye-laws permit) either for cavity walls formed from two skins of lathing, the outer plastered with a waterproofed cement and sand, and the inner with ordinary plaster—or for cavity walls filled with porous concrete. This form of construction appears to be economical and possesses insulating and fireproof qualities.

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The plaster mix recommended for partitions is one part cement to three parts sand, with a small proportion of lime and hair. Only five coats are necessary—a rendering coat on one side, and floating and setting coats on both sides. Any usual finish is suitable for the setting coat. The partition should be propped or stayed to prevent distortion whilst the first, or straightening coat is being applied. A point the manufacturers stress is that time should be allowed for each coat to shrink, if shrink it must, before the next coat is applied.

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The manufacturers issue a clearly written book of instructions for fixing. The diagram at the head of these notes shows the method of wiring the rods at the top of partitions. The lathing is cut 2 ins. longer than the height of the partition, and three rows of crosses are removed, by means of a hammer, exposing the wires which are secured to the rod, as shown, and the rod is cramped to the ceiling. Fixing to the floor is made in a similar fashion.

The average cost of Bricanion partitioning, finished with plaster to 2 ins.. is 7s. per yard. On housing schemes, it has been erected for as little as 5s. 9d. per yard, where quantities have been sufficiently large to justify a reduction.

Machinery Guards

Although "Safety First" is now a generally accepted maxim, the average person is liable to succumb to the impulse to take unnecessary risks, unless restrained by something more tangible than a formula or slogan.

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This is particularly so in the case of those whose work is with machinery, in factories and workshops. Unless actually prevented by machinery guards, accidents will inevitably happen.

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The factory owner is, I believe, legally bound to make proper provision against accidents and is liable to heavy penalties if the safety devices provided are found to be inadequate, and in addition he may be faced with demands for substantial compensation.

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It is evident that legally and morally, and in self-interest, the guarding of machinery should be considered as a provision of greater extent than a perfunctory compliance with regulations.

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Unguarded driving belts or pulleys are potential sources of danger, yet machines, otherwise adequately protected, are often left with belt and pulley unguarded.

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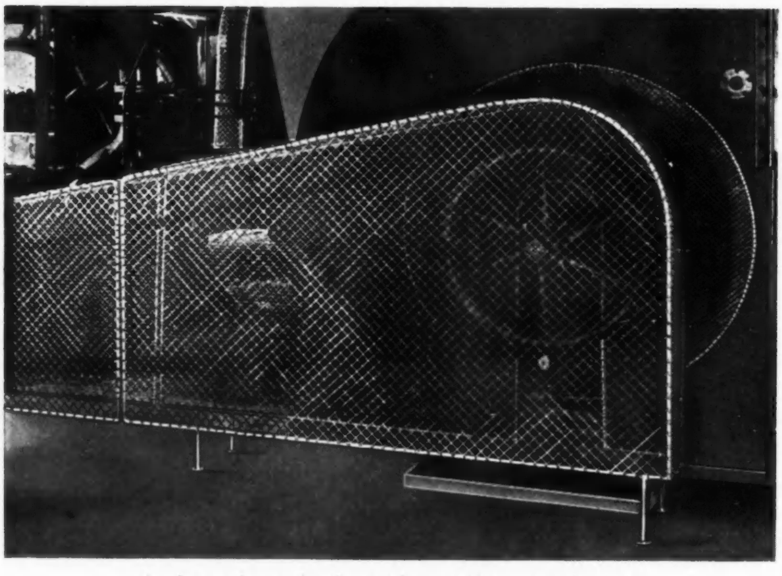
A satisfactory type of guard for machinery, belts or pulleys is strong wire mesh on stout steel rod frames. Belts and pulleys are sometimes guarded by being boarded in, but wood not only impedes inspection, but has the serious disadvantage of adding to the fire risk.



A wire mesh guard. See note on machinery guards above.

The accompanying illustration shows a wire mesh guard manufactured by Messrs. G. A. Harvey and Co. (London), Ltd., who specialize in this class of work.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue.

Universal House, Southwark Bridge, S.E.1 (pages 201-204 and supplement) General contractor, E. D. Winn & Co. Sub-contractors: James Allen and Cairns, Ltd., tiling (floor and walls); John Booth and Sons (Bolton), Ltd., shutter; James Clark and Sons, Ltd., glass (face of building); Carter & Co., Ltd., terrazzo; Caxton Floors, Ltd., floors; Carrier Engineering Co., Ltd., heating and ventilation; H. and C. Davis, Ltd., lift enclosure (metal work); Doulton & Co., Ltd., sanitary fittings; Edison Swan Electric Co., and Troughton and Young, Ltd., electric light fittings; James Gibbons, Ltd., Birmabright panels on front of building; General Construction and Engineering Co., iron staircase; Beric, Ltd., party wall; Samuel Haskins, fireproof door; London and Wales Steel Construction Co., steelwork; Limmer and Trinidad Lake Asphalt Co., asphalt; Morris Singer Co., metal letters on main façade; George Newton and Hill, reinforced concrete pile caps; W. and C. Pantin, Ltd., letter shute; Pinching and Walton, Ltd., electrical installation; Sturtevant Engineering Co., vacuum cleaning plant; Speirs & Co., ironmongery; George Tate and Son and West's Rotinoff Piling Co., piling; Titan, Ltd., hand power lift; Waygood-Otis, Ltd., electric passenger lift; Willment Bros., excavations; Williams and Williams, Ltd., windows; Adamite Co., Ltd., Alundum non-slip tile and aggregates, Atlas White Portland Cement, Colemanoid Concrete Hardener; Redalon Ltd., Redalon liquid.

Reigate Bus offices (pages 208-209). General contractor, Howard G. Waters. Sub-contractors: Acme Flooring and Paving Co. (1904) Ltd., wood block flooring; George Aldington, lightning conductor; Banister Walton & Co., Ltd., constructional steelwork; Carter & Co. (London) Ltd., terrazzo work; Comyn Ching & Co., Ltd., ironmongery and metalwork; Cork Insulation Co., Ltd., cork tiling; H. W. Dutton & Co., Ltd., heating installation; H. & C. Davis & Co., Ltd., fire-escape stairs; Electrical Installations, Ltd., electrical work; James Gibbons, Ltd., steel sashes; Leeds Fireclay Co., Ltd., sanitary fittings; Matthew Hall & Co., plumbing work; Ragusa Asphalte Paving Co., asphalt work; Roneo, Ltd., steel screens; Trussed Concrete Steel Co., Ltd., Reinforced Cconcrete Engineers, steel reinforcement; H. W. Wilcox & Co., cellar pump; Dorking Brick Co., bricks.

Hinderwell Council School, Scarborough (page 211) General contractors, Jaram and Son. Quantity surveyors, C. Pearson, Shaw and Son. Clerk of Work, Leonard Sharpe. Sub-contractors: Ed. Wood & Co., Ltd., constructional steel; Concrete, Ltd., Bison Precast Floors; Crittall Manufacturing Co., Ltd., steel windows; Acme Flooring and Paving Co., wood block flooring; W. G. Bailey & Co., electrical work; Kingfisher, Ltd., folding partitions; Art Pavements, Ltd., wall tiling; Walker and Hutton, electric light fittings; Adamsez, Ltd., sanitary fittings; Parker, Winder and Achurch, Ltd., cloakroom fittings; J. B. Swift and Sons, ironmongery; Penfolds, Ltd., railings; Haywards, Ltd., collapsible gates; F. Shackleton and Son, Ltd., stonework; Mellowes & Co., Ltd., steel lanterns; Educational Supply Association, Ltd., furniture.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

Plans passed by the BARKING Corporation : 71 houses, Becontree estate, for L.C.C. ; store, Cowbridge Lane, and additions Cape Lodge, North Street, for Cape Asbestos Co., Ltd. ; 186 houses, Alfred's Way estate, for Suburban Developments (London), Ltd. ; shop and house, Ripple Road, for Miss A. Hatch.

The Middlesex C.C. is to erect a block of seven shops with dwelling accommodation along the Uxbridge Road, HILLINGDON Village, at a cost not exceeding £12,350.

Plans passed by the MARYLEBONE B.C. : Projecting architectural features, 62-6, Great Portland Street, for Mr. G. G. Wornum, on behalf of the R.I.B.A. ; block of flats, 32, Abbey Road, for Messrs. Hart and Waterhouse ; block of flats, 18, Abbey Road, and 33-5, Grove End Road, for Western Heritable Investment Co., Ltd., block of flats, 2-4, Hall Road, for Mr. W. H. Potts ; building land, 56, Acacia Road, for Messrs. Wimperis, Simpson and Guthrie ; flats and shops, Park Road, for Messrs. T. P. Bennett and Son ; block of flats, site of 78-84, Grove End Road, for Mr. Robert Atkinson.

The POPLAR B.C. is to prepare a scheme for clearances involving over 900 persons. It is proposed to rehouse displaced tenants in 78 tenements in Emmett Street, and 18 in Old Ford Road.

Plans passed by the POPLAR B.C. : Reconstruction of the Grand Palace Cinema, Robinhood Lane, for Mr. C. Brett : alterations, Methodist Church, East India Dock Road, for Messrs. G. Parker and Sons, Ltd. ; additions, Upper North Street, for Mr. W. J. Foster ; additions, Lollar Wharf, West Ferry Road, for Messrs. Hooper, Cushen & Co. ; additions, " Old Duke of Cambridge " public-house, Devons Road, for Messrs. Vigor & Co. (Poplar), Ltd. ; six flats, Ida Street, for Messrs. Wilkins, Hatchett and Litt ; additions, " The Cobden Head " public-house, St. Leonards Road, for Messrs. William Harper, Ltd.

SOUTHERN COUNTIES

The EASTBOURNE borough engineer has prepared plans for the Redoubt improvement scheme, with an open-air bathing pool and tea chalet, at an estimated cost of £65,000.

Plans passed by the EASTBOURNE Corporation : Additions, Holy Trinity Parish Hall, Trinity Place, for Mr. F. C. Benz ; rebuilding Royal Marine Laundry, Winchelsea Road, for Mr. A. Ford ; alterations and additions, Marine Hall, Longostone Road, and eight houses, Rotunda Road, for Mr. S. G. Scales ; two houses, Harding Avenue, for Mr. A. J. Fellows ; additions, 376-8, Seaside, for Brighton Equitable Co-operative Society, Ltd. Plans submitted : Six houses, Astaire Avenue, for Mr. F. C. Benz ; two shops, Terminus Road, for Messrs. Ruck and Smith ; shops and flats, Seaside, for Messrs. P. D. Stonham and Son.

Plans passed by the HASTINGS Corporation : 24 houses, Bexleigh Avenue, for Mr. H. H. Ford; alterations to furniture store, Old London Road, for Mr. W. E. Rushton ; additions, Tivoli Hotel, Battle Road, for Messrs. Ward, Son and Wray ; shop addition, 37, White Rock, for Messrs. Bainbridge and Sons.

The HASTINGS Corporation Baths Committee recommends the reconstruction of the small swimming bath at the White Rock Baths, at an estimated cost of £11,250.

SOUTH-WESTERN COUNTIES

Plans passed by the CHELTENHAM Corporation : Seven houses, Prestbury Road, for Mr. G. A. M. Hall ; 18 houses, Mead Road, for Messrs. Bendall and Sons ; two houses, Lansdowne Road, for Mr. S. C. Morris ; 27 houses, Green Hyde estate, Winchcomb, for Messrs. Wheeler and Mansell, 14 cottages, Horsfair Street, Charlton Kings, for Messrs. Mark Williams & Co., Ltd. ; estate development, Cirencester Road, Charlton Kings, for Messrs. E. H. Bradley and Son ; two bungalows, Badgeworth Lane, for Mr. A. A. Bolton.

MIDLAND COUNTIES

The NORTHAMPTON Corporation has adopted a programme for clearances, involving the rehousing of 1,400 persons.

The Warwickshire Education Committee is to erect a junior school at Sharman's Cross, SOLIHULL, at a cost of £10,000.

Plans passed at STOKE-ON-TRENT : Two houses, Highfield Avenue, Oakhill, for Messrs. W. Ball and Sons ; four houses, Longton Road, Trentham, for Messrs. Shaw and Roden : four houses, Kensington Road, Hartshill, for Mr. E. Jones ; two houses, Colin Road, Trent Vale, for Messrs. P. Bailey & Co. : four houses, Burnhay's Road, Burslem, for Mr. F. Barlow ; two houses, St. George's Avenue, Burslem, for Mr. J. W. Walton ; two houses, North Street, Ball Green, for Mr. R. Simcock ; two houses, Central Avenue, Bucknall, for Mr. F. J. Williams ; 14 houses, Leek New Road, Sneyd Green, for Messrs. Shenton Bros. ; shop, Abbots Road, Abbey Hulton, for Mr. A. E. Goodwin ; two houses, Bagnall Road, Milton, for Mr. J. Millington : two houses, Greasley Road, Abbey Hulton, for Messrs. Gosling and Mayer ; five houses, Hanley Road, Sneyd Green, for Mr. J. Jackson : two houses, Leek New Road, Cobridge, for Messrs. Leese and Peers ; 40 houses (amended plan), off Grove Road, Fenton, for Mr. J. B. Thompson ; two blocks of tenements, Grove Road, Trent Vale, for Mr. W. Ball ; two houses, Beechfield Avenue, Trentham, for Mr. T. C. Rees Jones ; shop, London Road, Newcastle, for Messrs. H. Goodwin and Son ; three houses, Chell Green Avenue, for Mr. C. Kearton ; shop, Leek Road, Abbey Hulton, for Mr. N. Price ; six houses, Abbey Road, Bucknall, for Mr. W. Withington ; two houses, Bog Lane, Lightwood, for Mr. C. Kinson ; four houses, Longton Lane, for Messrs. Watkin, Malpass and Witham ; alterations, Railway Inn, Newcastle Street, Burslem, for Messrs. S. Allsopp and Son ; three houses, Turner Street, Hanley, for Mr. G. Whymark : alterations, Shamrock Inn, Bryan Street, for Messrs. Parker's Brewery ; joinery works, Morley Street, Hanley, for Mr. T. Gough ; warehouse, Kingsway, for Messrs. Palfreymans : additions, High Street, Stoke, for the Normeir Tyre Co. ; extension to board room, Boothen Old Road, for the Stoke Football Club Co., Ltd. ; 26 houses, Grove Road, Fenton, for Mr. J. B. Thompson ; alterations to premises, 84 and 86 Victoria Road, Fenton, for Mr. T. W. Greer ; alterations to shop, off Goms Mill Road, Longton, for Mr. George ; 24 houses (amended plan), Chell Lane, Tunstall, for Mr. L. J. Cope ; alterations and additions, Newport Lane, Burslem, for Malkin Tile Works ; house and shop, Leek Road, Abbey Hulton, for Mr. M. Price ; additions (amended plan), Ellgreave Pottery, Burslem, for Ellgreave Pottery Co., Ltd. ; 10 houses, Cromer Road, Hartshill, for Mr. E. Pierce ; alterations, Liverpool Road, for Messrs. Jackson's Stores, Ltd. ; additions to earthenware works, for Messrs. Mintons, Ltd. ; workshop, Woodking Firelighter Factory, Victoria Street, Hartshill, for Copes' Timber Co. ; alterations and additions, Queen's Inn, High Street, for Messrs. J. Davies and Sons ; 16 flats, Grove Road, Trent Vale, for Mr. William Ball ; four houses, Littlefields, Trent Vale, for Messrs. P. Bailey & Co. ; five houses, Cauldon Road, for Mr. G. H. Broad ; two houses, Blurton Road, Fenton, for Messrs. Bowman and Woodfield.

NORTHERN COUNTIES

Plans passed at RAWTENSTALL : Two houses, Haslingden Road, for Messrs. H. Trickett and Son, Ltd. ; alterations, 125 Haslingden Old Road, for Mr. W. E. Hoyle ; extension, Osborne Mill, Whitewell Bottom, for Messrs. L. Howarth and Sons, Ltd. : alterations, 5 Bacup Road, for Mr. W. Wint ; five houses, Burnley Road, for Mr. J. R. Greenwood ; alterations, Springhill, Higher Cloughfold, for Dr. E. L. Compston ; eight houses, Burnley Road, for Messrs. G. Clayton and Sons, Ltd.

Plans passed by the SHEFFIELD Corporation : Four houses, Forres Street, for Mr. F. Ridal ; two houses, Cawthorne Grove, for Mr. W. A. Wright ; two houses, Ecclesall Road, for Mr. H. E. Mottrom ; four houses, Bishop Hill, for the executors of Mr. J. H. Cottrill ; five houses, Stone Delf, for Mr. J. W. Sivil ; two houses, Marsh House Road, for Mr. S. Martin : four houses, Abbeyfield Road, for Messrs. Becker, Alborough, Ward and Bamford ; two houses, Perigree Road, for Mr. W. A. Wright : 12 houses, Laird Avenue, for Messrs. W. Marlow and Sons, Ltd. ; two houses, Milden Road, for Mr. P. H. Slater ; 10 houses, Grove Avenue, for Mr. J. B. Reed ; four houses, Greenwood Road, for Messrs. W. and E. Sadler, Ltd. ; four houses, Norton Lees Crescent, for Messrs. Bonser Bros. ; two houses, Meadow View Road, for Mr. C. H. Beardow ; 58 houses, Mansfield Road, for Messrs. J. H. Naylor and Son ; three houses, Norton Lees Lane, for Mr. H. Hammett ; two houses, Folds Crescent, for Mrs. E. Gandy ; 10 houses, Derbyshire Lane, for the City and Suburban Estates, Ltd. ; eight houses, Forres Avenue, for Mr. W. A. Wright ; two houses, Lismore Road, for Mr. W. H. Kilner ; two houses, Ranmore Cliffe Road, for Mr. C. Walker ; two houses, Harcourt Road, for Messrs. Reeves, Charlesworth, Ltd. ; five houses, Cobden View Road, for Mr. H. Tunbridge ; four houses, Brooklands Avenue, for Mr. G. M. Taylor ; house and shop, Manor Lane, for Mr. G. W. Blythe ; 12 houses, Sturton and Pexton Roads, for Mr. C. W. Alflat ; five houses, Hollinsend Road, for Mr. D. Kay ; two houses, Dobcroft Road, for Mr. W. Green ; four houses, Warminster Road, for Mr. S. Clark ; three houses, Abbey Crescent, for Mr. J. V. Auckland ; 12 houses, Church Lane, for Mr. P. Cadman.

Plans passed by the SHIPLEY U.D.C. : Six houses, Wycliffe Road, for Mr. A. Kendall ; 24 houses, Taunton Street, for Messrs. William Pitts and Sons ; nine houses, Maddocks Street, for Mr. H. J. Holden ; two houses, Westfield Grove, for Mr. A. Dickenson.

Trade Item

The latest addition to the Penberthy automatic cellar and sump drainers, marketed by Messrs. W. H. Willcox & Co., Ltd., is the electric model. This new drainer is operated by electric current instead of by water pressure. It operates only when water accumulates, causing the float to rise and make contact by means of the special mercury type switch, and immediately ceases action when the water has been disposed of and float falls. It is also claimed to be particularly suitable in cases where town water pressure is not available or is very low ; where excessive quantities of seepage water have to be handled ; where discharge heads are up to 20 feet ; and where low cost of operation is an important factor.

The electric drainer is constructed throughout of bronze with the exception of the motor, the latter being connected to the Tobin bronze fully enclosed impeller shaft by flexible couplings. There are therefore no gears, no vibration or lost power. A.C. motors are repulsion-induction type. The pump is of the centrifugal type with machined bronze impeller. The pump is submerged and therefore always primed.

Penberthy cellar drainers were used in the bus offices at Reigate, illustrated on pages 208-209 of this issue.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen ; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	Aberdare	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	Banbury	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5	1 0¾
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton	N.W. Counties	1 5	1 0¾
A_2	Cambridge	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A	Cumberland	N.W. Counties	1 4	1 0
A	Darlington	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_2	Eastbourne	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	Felixstowe	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	Gateshead	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	Halifax	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_2	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	Ilkley	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	Jarrow	N.E. Coast	1 5½	1 1¼
A	Keighley	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	Lancaster	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	Macclesfield	N.W. Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	Nantwich	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	Oakham	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	Paisley	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	Queensferry	N.W. Counties	1 5½	
A_2	Reading	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	St. Albans	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	Tamworth	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1 1¼
A	Tyne District	N. E. Coast	1 5½	1 1¼
A	Wakefield	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	Yarmouth	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

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* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	,,		7	6
Building Sand	,,		7	9
Washed Sand	,,		8	9
2" Broken Brick	,,		8	3
¾" ,, ,,	,,		11	0
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

Best Stoneware Drain Pipes and Fittings

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
Iron Drains:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin			5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	9	2	6
,, Wirecuts	,,	8	2	6
,, Brindles	,,	7	6	6
,, Bullnose	,,	9	14	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	8	8	0
Luton Facings	,,	8	0	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	5
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		19	0
,, ⅞"	,,	1	1	6
,, 1"	,,	1	3	6
,, 1¼"	,,	1	7	6
,, 1½"	,,	1	12	0
Deal matchings ½"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1½"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
Tubes.			
Gas	65	Galvanized gas	52½
Water	61¼	,, water	47½
Steam	57½	,, steam	42½
Fittings.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	,,	8	6
,, ,, ⅜"	,,	8	3
,, ,, ½"	,,	8	0
,, ,, ⅝"	,,	7	6
,, ,, ¾"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	,,	5	0	8	6
Boots	,,	3	3	4	5
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	2	0
,, drawn pipes	,,		19	0
,, soil pipe	,,	1	6	0
,, scrap	,,		14	6
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			10½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s. d.		s. d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.			2½
,, ,, 26 oz. ,, ,, ,,	,,			3½
Arctic glass, white	,,			7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,			6½
¼" Hartley's rough rolled	,,			7
¼" ,, wired cast	,,			10
¼" Georgian wired cast	,,			11
¼" Polished plate, n/e 1 ft.	,,	†7½	to	‡1 0
,, ,, 2	,,	†10	,,	‡1 3½
,, ,, 3	,,	†1 4½	,,	‡1 10
,, ,, 4	,,	†1 11	,,	‡2 4
,, ,, 6	,,	†2 3	,,	‡2 7½
,, ,, 8	,,	†2 5	,,	‡3 0½
,, ,, 12	,,	†2 10	,,	‡3 3½
,, ,, 20	,,	†3 3½	,,	‡3 9
,, ,, 45	,,	†3 6½	,,	‡4 0½
,, ,, 65	,,	†3 11½	,,	‡4 4
,, ,, 90	,,	†4 4	,,	‡4 9
,, ,, 100	,,	†4 6	,,	‡4 11
Vita glass, sheet, n/e 1 ft.	,,			1 0
,, ,, ,, ,, 2	,,			1 3
,, ,, ,, over 2	,,			1 9
,, ,, plate, n/e 1 ft.	,,			1 6
,, ,, ,, 2	,,			3 0
,, ,, ,, 5	,,			4 0
,, ,, ,, 7	,,			5 0
,, ,, ,, 15	,,			6 0
,, ,, ,, over 15	,,			7 6
Putty, linseed oil	lb.			3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	1
Boiled oil	,,		2	3
Turpentine	,,		4	9
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

			£	s.	d.
Digging over surface n/e 12" deep and cart away		Y.S.		2	9
,, to reduce levels n/e 5' 0" deep and cart away		Y.C.		8	6
,, to form basement n/e 5' 0" deep and cart away		,,		9	0
,, ,, 10' 0" deep and cart away		,,		9	6
,, ,, 15' 0" deep and cart away		,,		10	0
If in stiff clay	add	,,		2	6
If in underpinning	,,	,,		4	0
Digging, return, fill and ram	,,	,,		4	0
Planking and strutting to sides of excavation		F.S.		1	0
,, ,, to pier holes		,,			5
,, ,, to trenches		,,			5
,, ,, extra, only if left in		,,			3
Hardcore, filled in and rammed		Y.C.		10	0
Portland cement concrete in foundations (6-1)		,,	1	6	0
,, ,, ,, (4-2-1)		,,	1	12	6
,, ,, ,, underpinning		,,	1	16	0
Finishing surface of concrete, spade face		Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
,, junctions		3	9	4	6
Gullies and gratings	,,	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
,, ,, in cement	,,	29	15	0
,, Stocks in cement	,,	35	15	0
,, Blues in cement	,,	52	0	0
Extra only for circular on plan	,,	2	0	0
,, backing to masonry	,,	1	10	0
,, raising on old walls	,,	2	0	0
,, underpinning	,,	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	,,			5½
,, ,, ,, red brick facings and pointing	,,			11
,, ,, ,, blue brick facings and pointing	,,		1	4
,, ,, ,, glazed brick facings and pointing	,,		3	6
Tuck pointing	,,			7
Weather pointing in cement	,,			3½
Slate dampcourse	,,			10
Vertical dampcourse	,,		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	,,	6	9
¾" paving or flat	,,	4	0
1" paving or flat	,,	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	,,		2
Rounded angle	,,		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	,,		13	6
Artificial stone and do.	,,		13	0
York stone templates, fixed complete	,,		10	6
,, thresholds	,,		13	6
,, sills	,,	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	,,	3	7	0
Do., 24" × 12"	,,	3	17	0
Westmorland slating, laid with diminished courses	,,	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	,,	3	0	0
Do., all as last, but of machine-made tiles	,,	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	,,	4	6	6
,, ,, ,, ,, ,, ,, (green)	,,	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
,, to stanchions	,,			8
,, to staircases	,,		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	,,		4	6
,, ,, roofs	,,		6	6
,, ,, trusses	,,		7	6
,, ,, partitions	,,		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" ,, ,, ,, ,,	,,	1	17	6
1¼" ,, ,, ,, ,,	,,	2	3	0
¾" × 2" fir battening for Countess slating	,,		9	6
Do. for 4" gauge tiling	,,		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
,, ,, ,, 2 ,,	,,		2	9
,, ,, ,, 3 ,,	,,		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" ,, ,, ,, ,, ,,	,,		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and ongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	,,	2	12	6
1½" do.	,,	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1½" do.			1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" ,, ,,	,,	2	2
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	3	9
2" ,, ,, ,,	,,	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" ,, ,, ,,	,,	2	8
1½" ,, but moulded both sides	,,	2	4
2" ,, ,, ,,	,,	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" ,, ,,	,,	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	2	6
1½" deal moulded wall strings	,,	2	1
1½" ,, outer strings	,,	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" ,, ,,	,,	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	,,	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	,,		19	6
Do. stanchions with riveted caps and bases and do.	,,		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	,,		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	16	6
Do. in flashings		1	19	0
Do. in covering to turrets, etc.	,,	2	6	0
Do. in soakers	,,	1	12	0
Labour to welted edge	F.R.			3½
Open copper nailing	,,			3½
Close ,, ,,	,,			4½

		½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1¼" s.	1¼" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks	F.R.	1	0	1	2	1	5	2	1	3	0	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	3
Do. to stop ends	,,		6½		8		9		11	1	3	—	
Boiler screws and unions	,,	3	3	3	9	5	0	8	0	—		—	
Lead traps	,,	—		—		—		6	3	8	9	—	
Screw down bib valves	,,	6	9	9	6	11	0	—		—		—	
Do. stop cocks	,,	9	0	11	0	14	6	20	6	47	0	—	

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	,,	1	6
Do. outlets	,,	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	,,	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	,,		3	6
Lathing with sawn laths to ceilings	,,		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	,,		1	9
Do. vertical	,,		2	3
Rough render on walls	,,		1	4
Render, float and set in lime and hair	,,		2	0
Render and set in Sirapite	,,		2	2
Render, backing in cement and sand, and set in Keene's cement	,,		3	1
Extra, only if on lathing	,,			4
Keene's cement, angle and arris	F.R			6
Arris	,,			2
Rounded angle, small	,,			3
Plain cornices in plaster, including dubbing out, per 1" girth	,,			1½
1" granolithic pavings	Y.S.		3	6
1½" ,,	,,		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	,,		17	6
9" × 3" ,, ,, ,, ,,	,,	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

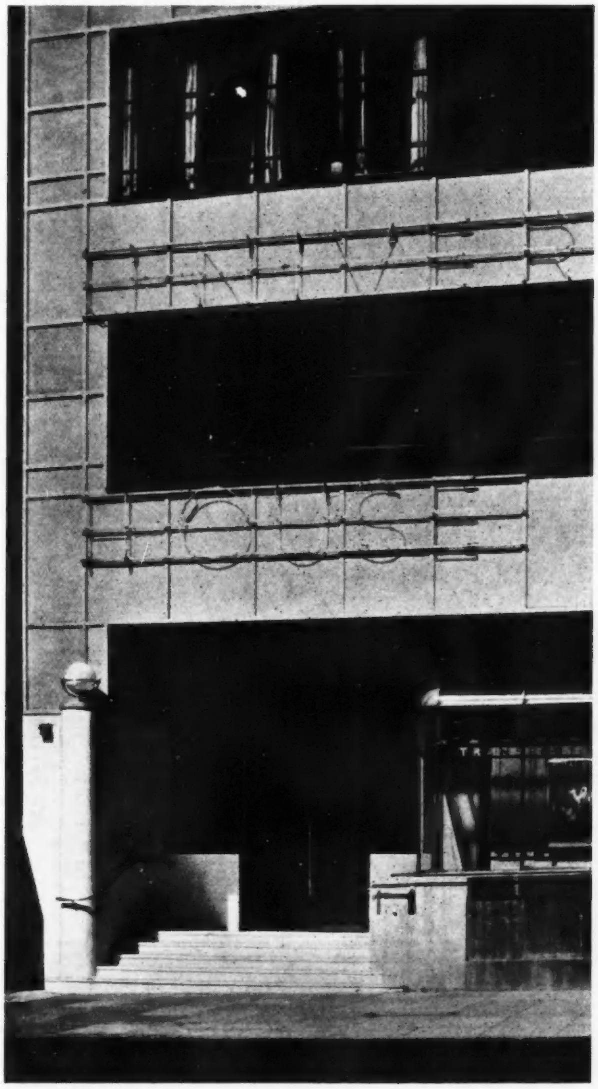
		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	,,		8½
Arctic glass and glazing with putty	,,	1	1
Cathedral glass and do.	,,	1	2
Glazing only, British polished plate	,,		7
Extra, only if in beads	,,		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	,,		9
Do. with washable distemper	,,	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3	3
Do. on woodwork	,,	3	6
Do. on steelwork	,,	3	0
Do. and brush grain and twice varnish	,,	5	6
Stain and twice varnish woodwork	,,	1	11
Stain and wax-polish woodwork	,,	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper from	,,	2	9

UNIVERSAL HOUSE

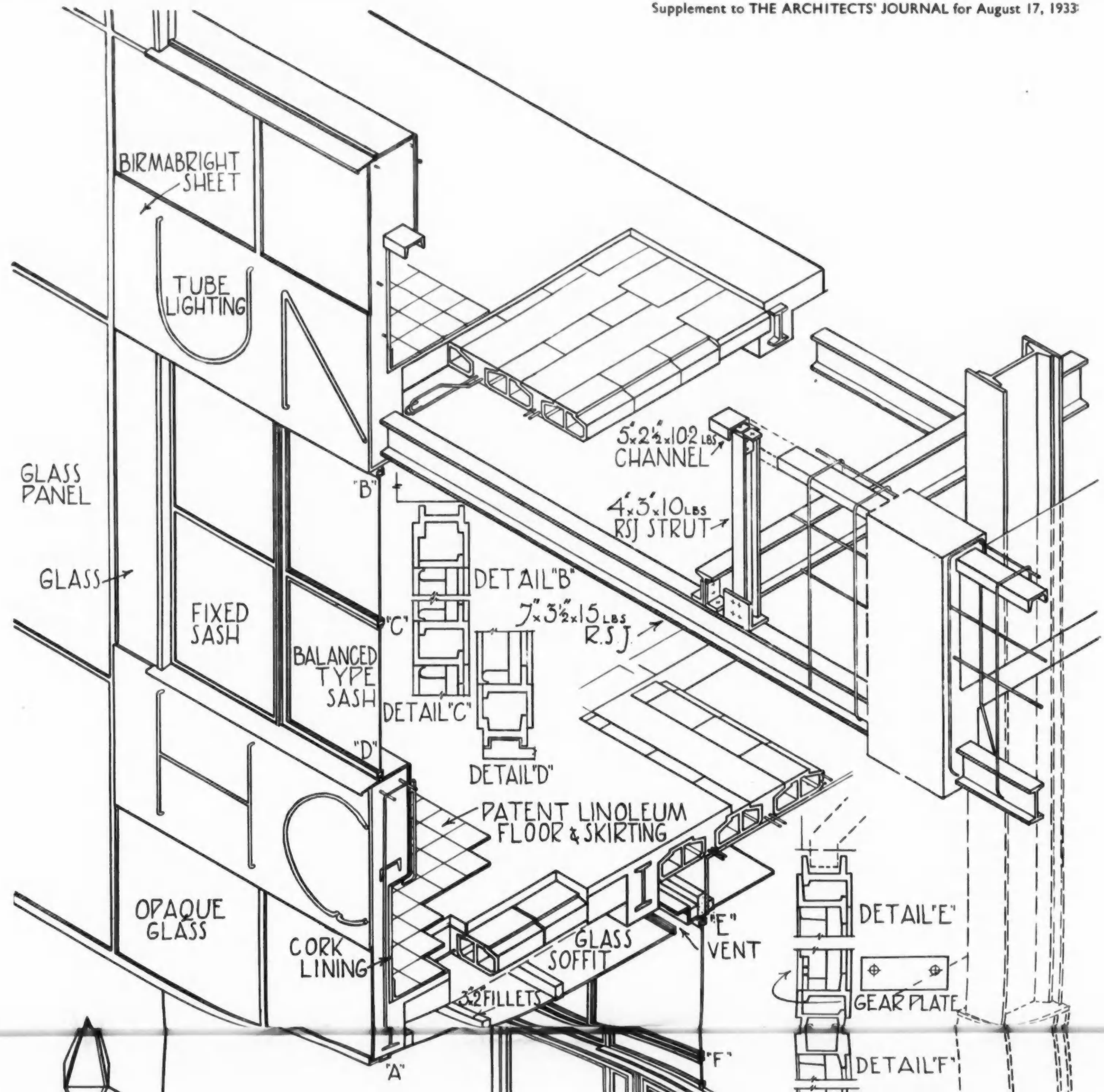
SOUTHWARK BRIDGE, S.E.

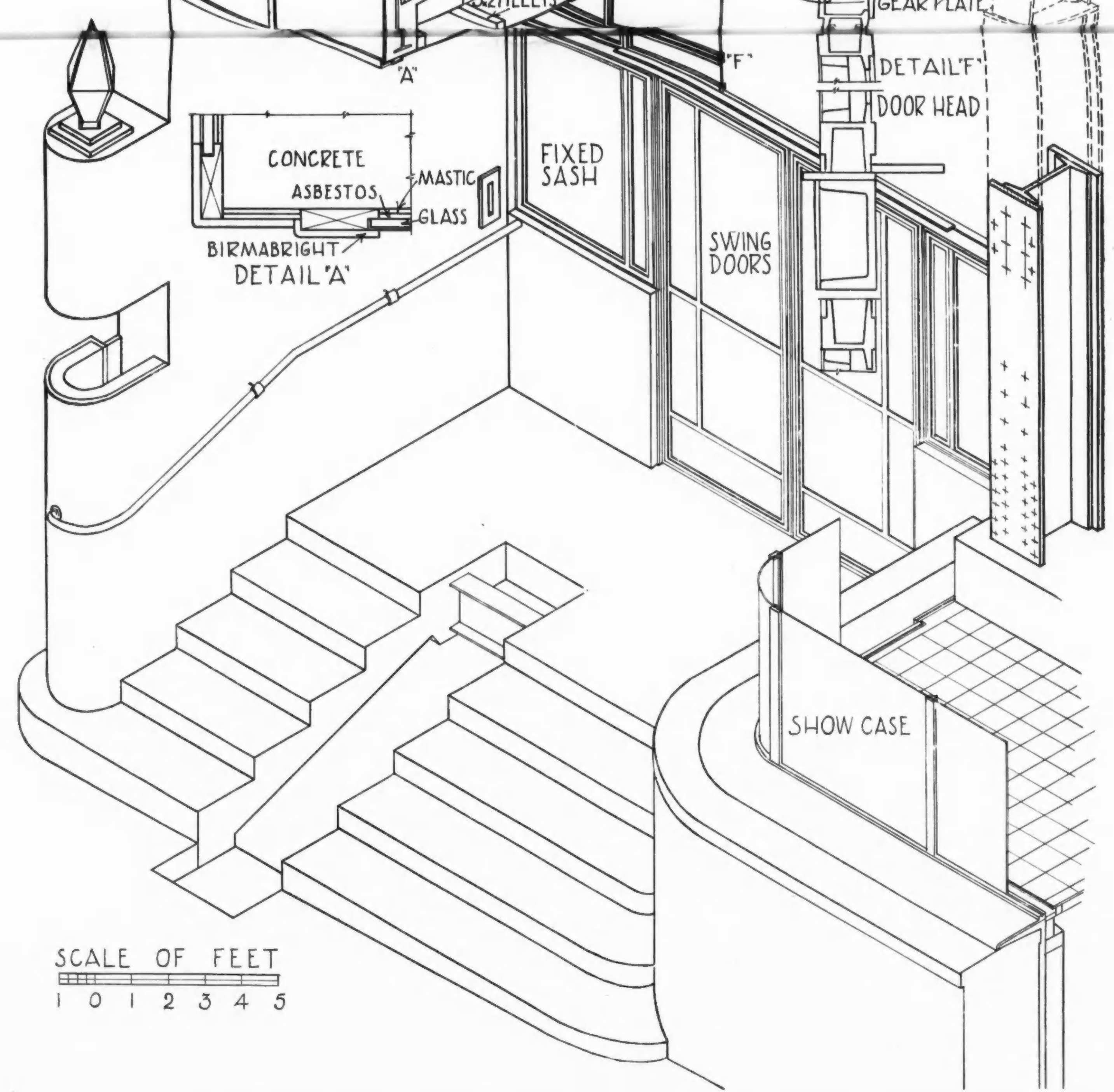


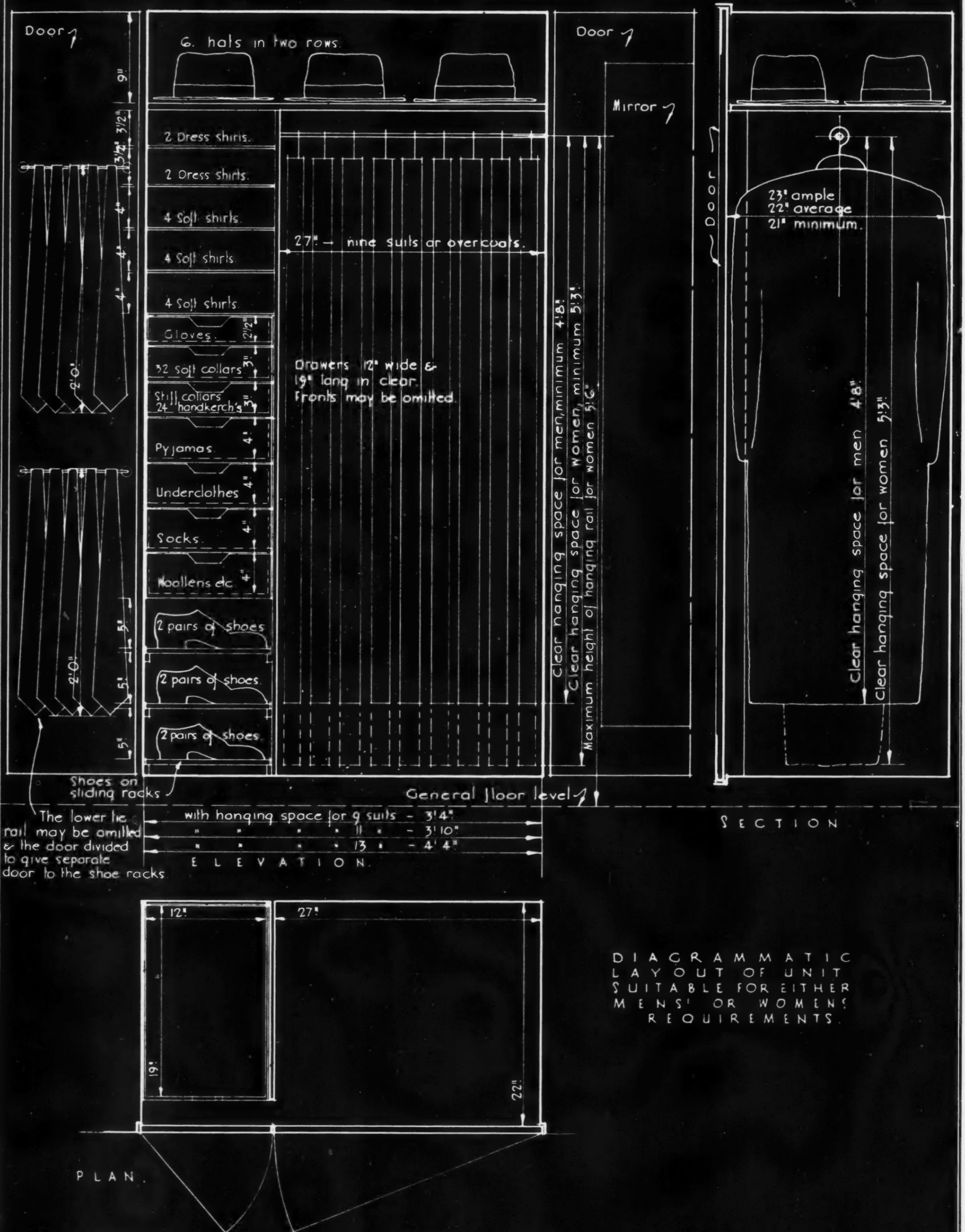
OVERLEAF is reproduced an isometric drawing showing the wall and floor construction of Universal House, designed by Joseph Emberton, which is further illustrated in the body of this issue.

The external facing material is $\frac{5}{16}$in. rough cast double rolled glass. Between the glass and the concrete face is a sheet of asbestos millboard which imparts a white colour to the glass. This, combined with the green of the glass itself, gives an egg-shell effect.

The drawing also shows the construction of the entrance portion, of which the above is a photograph.


BIRMABRIGHT SHEET
TUBE LIGHTING
GLASS PANEL
GLASS
FIXED SASH
BALANCED TYPE SASH
OPAQUE GLASS
CORK LINING
"B"
"C"
"D"
"A"
"E"
"F"
5"×2½"×10·2 LBS CHANNEL
4"×3"×10 LBS RSJ STRUT
7"×3½"×15 LBS R.S.J.
DETAIL "B"
DETAIL "C"
DETAIL "D"
PATENT LINOLEUM FLOOR & SKIRTING
GLASS SOFFIT
3×2 FILLETS
VENT
DETAIL "E"
GEAR PLATE
DETAIL "F"


GEAR PLATE
DETAIL "F"
DOOR HEAD
"F"
"A"
CONCRETE
ASBESTOS
MASTIC
GLASS
BIRMABRIGHT
DETAIL "A"
FIXED SASH
SWING DOORS
SHOW CASE
SCALE OF FEET
1 0 1 2 3 4 5


Door
6. hats in two rows.
Door
Mirror
Door
9"
3½" 3½"
3½"
4"
4"
4"
2'0"
2'0"
5"
5"
5"
2 Dress shirts.
2 Dress shirts.
4 Soft shirts.
4 Soft shirts.
4 Soft shirts.
Gloves.
2½"
32 Soft collars
3"
Stiff collars
24 handkerch's
3"
Pyjamas.
4"
Underclothes
4"
Socks.
4"
Woollens etc.
4"
2 pairs of shoes.
2 pairs of shoes.
2 pairs of shoes.
27" – nine suits or overcoats.
Drawers 12" wide & 19" long in clear.
Fronts may be omitted.
Clear hanging space for men, minimum 4'8".
Clear hanging space for women, minimum 5'3".
Maximum height of hanging rail for women 5'6".
23" ample
22" average
21" minimum.
Clear hanging space for men 4'8".
Clear hanging space for women 5'3".
Shoes on sliding racks
General floor level
The lower tie rail may be omitted & the door divided to give separate door to the shoe racks
with hanging space for 9 suits – 3'4"
" " " " 11 " – 3'10"
" " " " 13 " – 4'4"
ELEVATION.
SECTION
12"
27"
19"
22"
PLAN.
DIAGRAMMATIC LAYOUT OF UNIT SUITABLE FOR EITHER MENS' OR WOMENS REQUIREMENTS.

INFORMATION SHEET: DIAGRAMMATIC LAYOUT OF WARDROBES, ETC
SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1

INFORMATION SHEETS • 30 • LAY-OUT OF WARDROBES

Supplement to THE ARCHITECTS' JOURNAL for August 17, 1933

INFORMATION SHEETS

• 30 •

LAYOUT OF WARDROBES: 2

•

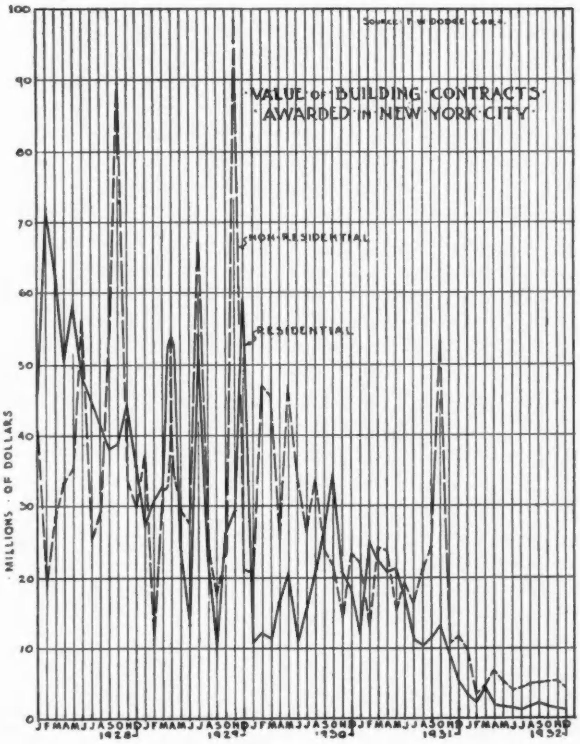
THIS is the second of the pair of Information Sheets illustrating the lay-out of wardrobes. Next week's Sheet will be devoted to miscellaneous common sizes, and will conclude the set on furniture and fittings.

The following is a full list of the subjects previously issued :—

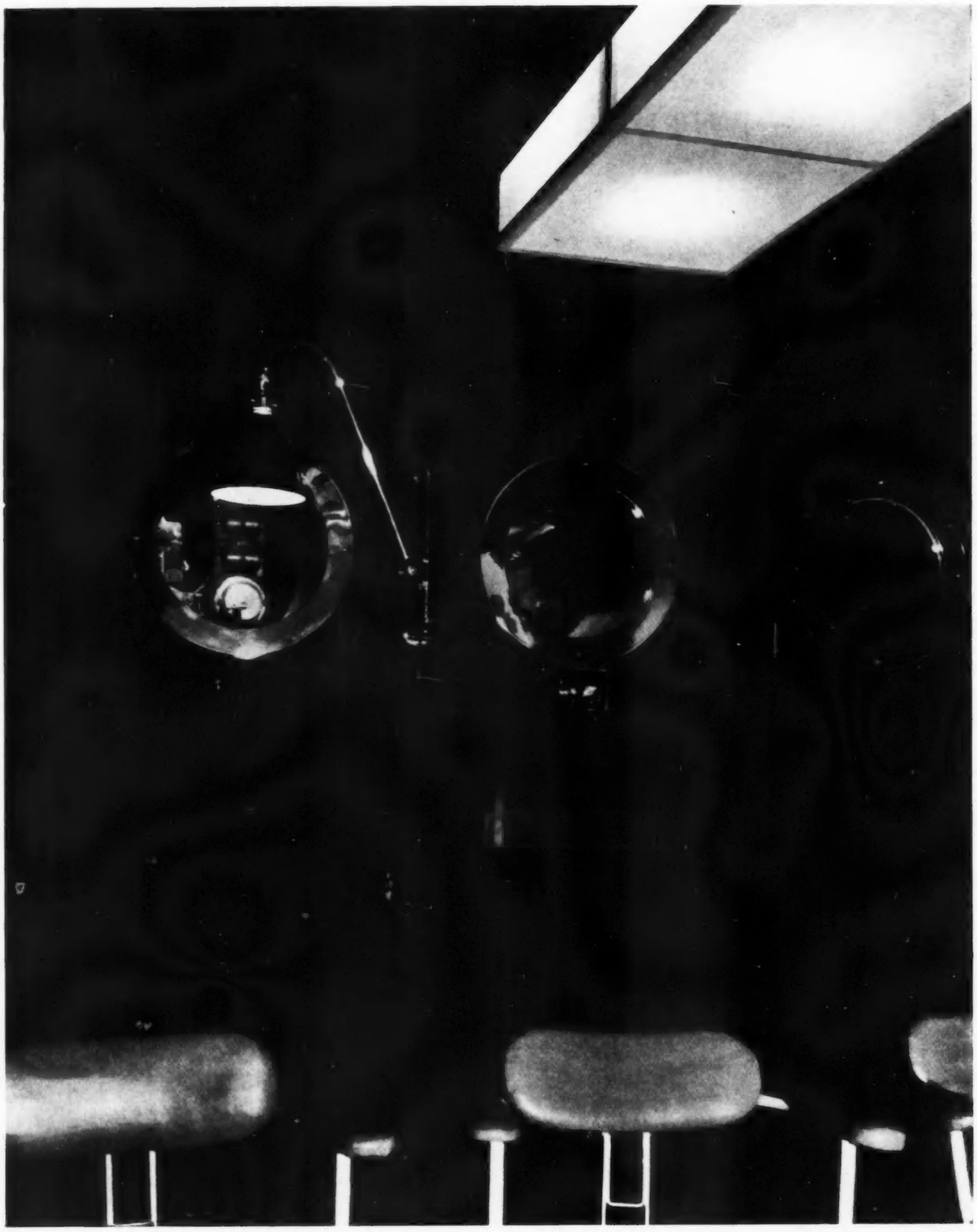
1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units: 1.
13. Apr. 12—Lavatory Units: 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs : 1.
23. June 29—Concrete Stairs : 2.
24. July 6—Pressed Steel Stairs : 1.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs : 2.
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes : 1.

BUILDING FIGURES

FOR THE CITY OF NEW YORK



A CHART showing the value of building contracts, residential and non-residential, awarded in New York City during the years 1928-1932 inclusive, from the Report of the State Board of Housing of New York, extracts from which are given on page 231 of this issue.



A FILM PROJECTION THEATRE

A photograph taken inside the small projection theatre in the basement of the offices of Steuart Films, Ltd., the remodelling of which, by Mr. Rodney Thomas, is illustrated on page 239 of this issue.

The projection holes are formed of stainless steel rings with special optical glass. The ceiling light is of cellulosed paper.

A HOLIDAY TASK FOR ARCHITECTS

IN school days the long August–September respite from routine was alloyed for many of us by a disciplinarian duty called "the holiday task"—often "an essay on something seen when away, such as a famous building," intended to stimulate our powers of observation. We began by cursing the incubus as an unwarrantable interference with the sacred holiday-liberty of the schoolboy, and ended by finding it rather fun.

Once again the summer holidays are with us, and architects, as other people, are going abroad, or to different parts of this country, to rest, relax and "get away from shop." But like every eye trained to pick out certain things, the architect's cannot rest or relax. However far from colleagues he may be, his wakefully critical "eye for form" involuntarily appraises and distinguishes, compares and classifies. Quite as many architects take "professional holidays" as holidays from their profession. What are probably the majority compromise by "looking round a bit as well" in that spasmodic, if-the-mood-takes-them sort of way, "bright" papers assure us, is "the true holiday spirit." When they come across interesting details or jobs of work that make them sit up and take notice, their "notes" are apt to be vaguely mental instead of graphically definite. "There was a petrol-filling station I saw in Switzerland which solved the problem you mention rather neatly. Somewhere between X and Y, I think; but we were motoring, and there wasn't time to take a photo or do a rough drawing." One has heard a good many fellow-architects say that sort of thing unconscious of having wasted decidedly useful data for future reference.

Most of us will be taking cameras, some even sketching albums. The inquisitive question "What are you going to snap?" may sound suspiciously like a selling slogan for the photographic industry—and, incidentally, that industry might find it commercially worth while to promote an architectural holiday competition with a panel of younger members of the R.I.B.A. as assessors. Actually it is intended to encourage the collection of educative material which architects alone are fitted to select; material for the archives of a sort of unofficial "Film Institute" for Architecture and Planning. Why not use some of your spools or plates to secure documentation of value to the Common Cause, "The Bill of Rights Petition for Urban Dignity and Rural Decency"? If well pleaded (that is, well exemplified by photographic arguments) an overwhelming case can be presented.

It is the architect's business to set public standards of taste, order and seemliness, but no single architect can hope to accomplish this by his works alone.

Neither the observance nor the violation of these standards can be made comprehensible without concrete "gerundive" illustrations of things "*that should be done*" and things "*meet to be shunned*." Far more buildings than not are being "designed" by people who are not architects at all. Counter-propaganda must be used to prove the melancholy results; and to combat the hitherto almost unchallenged mass-suggestion of, say, "the usual thing" in ribbon-line Metro-Bess suburban villas, by demonstrating practical ways of avoiding shoddy "speculative" solutions. Propaganda exhibitions are constantly being held by the C.P.R.E., D.I.A., and local architectural societies. (One called "To Plan, or Not to Plan" is now being organized by Mr. H. H. Peach, of Leicester.) "Look in Your Own Street-Mirror" cautionary-constructive guides are issued for more and more self-satisfied towns and districts.

These guides and exhibitions require a constantly renewed supply of pertinent photographs, for the lessons of old ones soon pall from familiarity. Let that mechanical "printing eye," your camera's lens, reproduce what your sentient eye discerns without recording; and so help your own profession to make Britain a better place to look at, and so live in.

Expose the sort of "improvements" where the fact belies the name, like the "up-to-date structures" (rejazzed Paris 1925) for which "out-of-date" Regency and Early-Victorian buildings of eternal modernity are being demolished wholesale. Show whether the E.M.B.'s good example in advertisement emplacements is being at all generally followed; and what progress can be reported from the home front in the design of "street furniture" (including everything from lamp-posts to lavatories), private corrugated-iron or wall-board garages, bungalows, road-houses, cafés, the wretched sheds called "coal-offices" that litter station approaches, and stations themselves. Your Continental snapshots of stadiums, *autostradi* and electric transmission-masts will be optical evidence that football-grounds need not look like bear-gardens; that the Great West Road could have been "built up to" very differently; and that simple shapes in concrete are comelier than creosoted timber crucifixes, or Euclid propositions in steel hairpins. Reveal the superior humanities of Teutonic rehousing, and that great clarity (even in Sir Henry Maybury's "practical" sense) if poor material characterizes French road signs.

All this, and a whale more besides, you can exemplify if you will. Why not lend a hand?

The Architects' Journal
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6 9 3 6
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Buildable
Parl.
London

NOTES & TOPICS

YE OLDE RADIO SETTING

I IMAGINE that the promoters of the Radio Exhibition at Olympia said: " Now what we want is something of the old-time fair feeling, a touch of traditional England, yet complete freedom for the modern spirit." I've noticed that, whenever anything rather complicated is maturing directorial voices are prone to utter such congested imbecilities.

*

That's the imaginary prelude: now for the facts. Radiolympia is distinguished by near-Gothic arches over every stand, flanked by balls of illuminated glass upraised on columns. The attempt at standardization stops here, and stand-holders do their wicked will within the space allotted.

*

Compared with the bland discipline of Mr. Emberton's Advertising Exhibition last month, this show is a bear garden, in which unskilful display gives the most modern of our toys the maximum possible unattractiveness.

*

The General Post Office, from whom one might have expected better ideas, has staged such an incredibly muddled exhibit, that it is impossible to discover what His Majesty's Postmaster-General thinks he is demonstrating. How to waste space, maybe: anyhow, a prodigious amount of it was put at the disposal of the G.P.O.

*

But, in spite of everything one regrets in the design and display of the exhibits, the show is worth seeing. The design of radio cabinets is beginning to improve. Fretwork is beginning to date.

THE FUTURE OF LONDON

Occasionally the daily Press, surfeited by politics or labouring through the dog days of summer, lends its columns to the discussion of such vital matters as the future of London.

*

Professor Adshead wrote in *The Evening Standard* for Monday last an extremely interesting article dealing with many of the problems of London re-development, and stamping hard on the worn-out fallacies that look for a future when every building is a landing ground and so on.

*

I agree with him when he says that " large areas of worn-out London should be entirely cleared " to give room to " tall blocks of buildings, set in open park-like spaces," and I would like to feel that we could surround London with a green belt to separate it from a ring of satellite towns. Even where in the last few years of town-planning, when it should have been possible to have safeguarded such areas, we have in fact watched the gradual encroachment of nearly every blade of living grass by the speculators' slums of the future.

*

AMERICA'S HOUSING BOARD

I have just finished a preliminary absorption of the year's report of the State Board of Housing of New York, and no better evidence for the value of a National Housing Board of the type proposed by Sir Raymond Unwin has yet come my way.

*

You must know that such things as voluntary Housing Associations have a fairly thin time of it in New York, where estate is and has been "real."

*

What impresses me so much about this report is its masterly analysis of the truth of " real estate " operations, exposing the horrid fluctuations between glut and demand that wreck the building industry, the rush to anything that pays, and the overloading of interest that finally knocks the bottom out of it. And resulting from this the vast, the appalling, expense of " speculative " slum property.

*

INFORMATION SHEETS

With this issue will be found two Information Sheets instead of the usual one Information Sheet and one other loose supplement. We propose, until further notice, to continue the practice here begun of giving two Information Sheets each week.

We have had numerous enquiries from readers as to the future subjects to be dealt with in the series, and requests for information on particular subjects such as Electric Lighting, Hot Water Systems, Kitchen Equipment, etc. The best way of meeting our readers' demands is, we think, to increase in this way the rate of publication of the Information Sheets, and Sheets on the above subjects will appear in the near future.

Against this is set the steadying effect of "investment" low-rental dwellings, carrying their own amortisation and paying their regular but low interest, at no loss to investor, city or dweller.

*

It is fantastic that our laws should be based upon the expectation of profits which so very clearly are only paid for out of the losses arising from the administration of slum property, and from the bankruptcy of fools too eager to make something for nothing to take the trouble to look at a few tell-tale figures.

*

MARS AT THE C.I.A.M. CONGRESS

MARS has returned from the Mediterranean, the scene of recent operations—I do not mean to imply hostilities—having learned much of what should be done and perhaps more of what should not be done, and even more of what actually has been done, and having taught the other fellow a thing or two about the *Function of the Town.*

*

I had an opportunity of listening to a member of the British Delegation recounting incidents of the voyage of *Patris II* and the Athens Congress, and it was he who took the photograph, reproduced here, showing le Corbusier smoking a cigarette of his own rolling and dreaming of functionalism, sun, air and light.

*

In the autumn we may all have an opportunity of seeing just what our architects do when they go abroad, for Maholy-Nagy made a Congress film, part of which was printed and cut in Athens and shown on the boat on the return voyage, and this may come to London soon—unless MARS suppresses it.

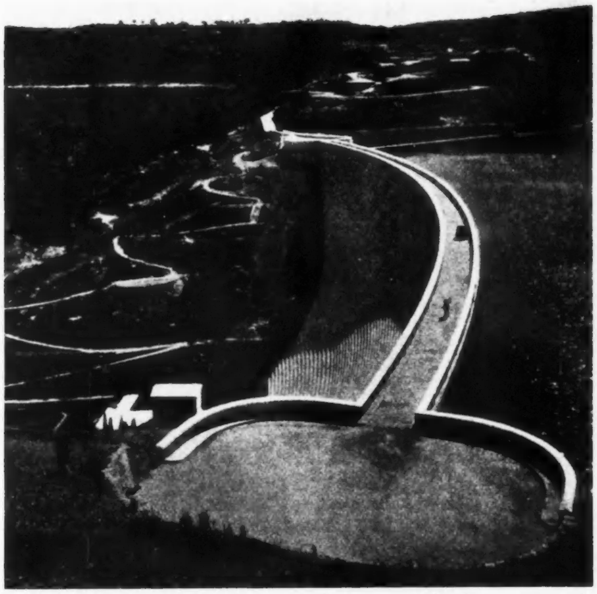
*

Between séances and siestas the congressites visited new constructions in Greece: the new schools, built on a standard model; the Papastratos cigarette factory, where modern machinery stirred romanticism in the functionalists; and the new dam at Marathon.

*

From time immemorial Athens has been a notoriously dry city, and for 1,800 years the water works completed by Antoninus Pius, successor of Hadrian, have provided the only water supply of the city.

M. le Corbusier, taken aboard the s.s. Patris II.



Dam and lake at Marathon. It is constructed of concrete and faced with white marble. See Astragal's note on this page.

*

As the city grew the supply proved inadequate, and the influx of some 250,000 refugees made conditions intolerable, many families of five or six persons having to be content with a petrol tin of water per day.

*

But in the summer of 1925 work was commenced on the new storage reservoir at Marathon, and a dam 54 metres high by 285 metres long was built across the natural valleys of two rivers to form a lake with a capacity of 41,000,000 cubic metres, nearly three years' supply. I understand it took 4,500 men nearly five years to complete the work and the water was first distributed in Athens in June, 1931.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, August 24

COTTAGES IN THE STRAND. Exhibition, until the end of the month, of the Building Centre prize-winning cottages on the Aldwych site, Strand, W.C.

R.S.A. INDUSTRIAL DESIGNS COMPETITION. At the Imperial Institute, South Kensington, S.W. Exhibition of the designs submitted in the tenth annual open competition. Until August 31. 10 a.m. to 5 p.m. (Sundays: 2.30 to 6 p.m.) 10 *a.m.*

EXHIBITION OF COTSWOLD ART AND CRAFTSMANSHIP. At the Alcuin Press, Chipping Campden, Glos. 11.30 a.m. to 7 p.m. (Sundays: 2.30 to 6.30 p.m.) until September 2. 11.30 *a.m.*

LONDON SOCIETY. Visit to Messrs. W. H. Smith and Son's Binding Works, Milford Lane, W.C.2. 2.30 p.m. Also, the new Dispatch Department, Portugal Street, W.C.2. 12 midnight. 2.30 *p.m.*

Saturday, August 26

Sunrise 6.2 a.m. Sunset 8.0 p.m.

Tuesday, August 29

LONDON SOCIETY. Motor-coach Excursion to West Wycombe. 2 *p.m.*

NEWS

●

POINTS FROM THIS ISSUE

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6,000 houses are required to relieve overcrowding in Bristol 244

●

IRISH FREE STATE TOWN PLANNING BILL

The Irish Free State Town and Regional Planning Bill has now passed through its initial stages in Dail Eireann, and the text is expected to be issued shortly. The provisions of the Bill has been the subject of much speculation in Irish architectural and building circles, and they are awaited with the keenest expectancy.

MR. W. CURTIS GREEN

We are sorry to learn that Mr. W. Curtis Green, R.A., met with an accident, near Victoria Station, on Monday evening. He was knocked down by a Green Line bus and was taken to St. George's Hospital, suffering from slight concussion. He is reported to be progressing satisfactorily.

SLUM

The first of a series of articles entitled "War on the Slums" was published in *The Times* for Monday last. The purpose of the series is to report the progress made by some of our larger cities in the framing of slum clearance schemes to meet the appeal of the Minister of Health for such an acceleration of rebuilding as will abolish slums within five years. It is pointed out that "the appeal made in April by the Minister for a concerted effort between the central administration and the local authorities of the country will lead to a great acceleration of the work of sweeping away 'the relic,' as Sir Hilton Young called it, 'of the time when general law and byelaws did not prevent the establishment of housing conditions which are intolerable according to present standards.'

"So far as the number of schemes actually received up to the middle of August is concerned, the response cannot be regarded as brisk. There are 1,717 housing authorities in the country, but to August 18 only 48 definite programmes had been sent to the Ministry, together with submissions from nearly 200 authorities that no slums existed in their areas. It is probable that about half the declarations of a 'clean sheet' are justified; in other cases the authorities, presumably, will be invited to revise their surveys.

"Although there has been an absence of haste in forwarding proposals for approval, this does not mean that any considerable proportion of the 1,500 authorities from whom nothing has yet been heard have disregarded, or been dilatory in acting upon, Circular 1331. A tour of some of the larger cities of the country in quest of the information to be summarised in this and succeeding articles showed that the position is being carefully and diligently investigated and that an estimate, at least, of what can be accomplished in five years is to be submitted to the Minister on or before the appointed date. The estimate in certain cases is likely to be accompanied by an intimation that the problem is beyond solution in a five-year period. There is a feeling in cities like Manchester, Liverpool and Leeds that the Ministry of Health circular, in the form it was sent out, was directed to the 'average' borough or urban authority with a limited slum liability, and that the big municipalities, burdened with the housing sins of the industrial boom in the nineteenth century, will, like London, have to be given special consideration."

DANGER AHEAD?

The unemployment figures recently issued show an increase of 7,441 for building and public works—2,624 for building, and 4,817 for public works. These figures, recorded at a time when unemployment is declining, give point to the warnings against over-optimism recently made by the Special Committee for Public Relations of the Building Industries National Council. It is true that since the inception of the Committee the volume of activity in the building industries has increased, but the outlook for the winter is grave, especially on the public works side.

If the industry is to avoid another disastrous winter, a special effort must be made to minimize the seasonal increases of unemployment. The Special Committee for Public Relations earnestly appeals for funds to enable it to make this special effort on behalf of the building industries.

Cheques for subscriptions should be made payable to "The Special Committee for Public Relations," and should be addressed to the Hon. Treasurer, at 5 Duke Street, Adelphi, W.C.2.

The two cities dealt with in detail in this article were Birmingham and Bristol. The former, it will be recalled, was one of the six cities discussed by Mr. Philip Massey in the Special Slum Issue of THE ARCHITECTS' JOURNAL for June 22; the latter is the subject of Mr. Massey's eighth article in our series, published on pages 242-244 of this issue.

The report of the Labour Party National Executive, to be submitted to the party's annual conference on October 2, has just been issued under the title *Housing and Slums.* The report emphasizes that "nothing less is necessary than a colossal and continuous drive for the proper housing of the nation. Miles of slum streets must be torn down. Whole districts must be cleared. New houses must be built by the hundred thousand. Reconditioning must be extensive. And all must be done in conformity with thorough-going town and country planning." It is suggested that a National Housing Council should be appointed to advise the Minister of Health, and to secure the co-operation of all the interests affected; and that the Minister, assisted by the Council, should be responsible for a long-term programme of slum-clearing and housing.

ANNOUNCEMENT

Mr. Edwin M. Lawson, A.R.I.B.A., Chartered Architect and Surveyor, has dissolved partnership with Mr. J. G. Cowe. He is now practising at 19, Ridley Place, Newcastle-upon-Tyne. Telephone No. 26552.

CIVIC HALL, LEEDS

The new Civic Hall, Leeds, designed by Mr. E. Vincent Harris, F.R.I.B.A., was formally opened by H.M. the King yesterday. It was erected at an estimated cost of £360,000.

R. I. B. A.

COUNCIL MEETING

Following are some notes from a recent meeting of the Council of the R.I.B.A.:

The Stirling Society of Architects: The draft Rules and Regulations of the newly-formed

Stirling Chapter of the Royal Incorporation of Architects in Scotland were formally approved by the Council.

The Fellowship : The Council, by an unanimous vote, elected the following architect to the Fellowship under the powers defined in the Supplemental Charter of 1925 : The Hon. G. Sturrock, Director of Public Works, Straits Settlements.

Membership : Election, October 23, 1933 :— Applications for membership were approved as follows :—As Fellows, five applications ; as Associates, 19 applications ; as Licentiates, eight applications.

Transfer to the Retired Members Class : The following members were transferred to the Retired Members Class : As Retired Fellows : Messrs. Basil Wallace Fitch-Jones and Joseph Craddock Perkin.

Resignations : The following resignations were accepted with regret : Messrs. Frederick B. Taylor [*A.*] ; Stanley Russell-Taviner [*L.*] ; and John Whitehead [*L.*]

Scale of Charges : The Scale of Charges for Local Authorities' and Public Utility Societies' Housing Work drawn up by the Special Committee on Fees for Housing Work, etc., was approved by the Council. Copies of this Scale were issued to members with the *R.I.B.A. Journal* for August 5.

Election of Students : The following Probationers were elected as Students of the R.I.B.A. : Intermediate Examination : Messrs. A. J. Atkinson, J. R. Bearparks, W. H. Beesley, M. H. G. Blackman, D. B. Bloore, C. M. Bond, R. S. Brooks, H. K. Brown, C. N. Byron, E. J. Chambers, H. D. Clifford, R. Cowing, B. H. Dale, G. H. Dickinson, S. Downing, G. Ellis, S. F. Everson, G. M. J. Geers, L. T. George, E. D. Haigh, G. A. Hancock, E. Hodgson, T. H. G. Hopkins, W. A. L. Hopkins, A. J. Horsfield, A. G. Hughes, E. Ingoldsby, J. Jackson, E. S. Jones, H. Judson, T. B. Kennedy, R. K. Lewis, A. C. Manuel, I. C. Martin, J. W. Mason, W. I. Mort, A. J. Newton, G. F. Owen, R. V. Pidgeon, H. L. Pitt, A. E. Potts, H. Richardson, R. Saddler, A. H. E. Shearing, P. B. Sidebottom, A. G. Sinclair, D. J. Smith, E. D. Smith, J. R. Southcombe, F. Stower, J. P. Taylor, J. W. Taylor, G. H. Thorpe, G. E. Twydell, S. W. Warn, C. D. Wheeldon, J. W. Williams, E. P. Wilson, W. G. Wilson, D. Wilton, E. Woods, L. O. Woodward, W. J. Wynn, and R. R. R. Young. Secured Approved Qualifications from the Dominions : L. G. Cahn and E. M. Sodersteen. Auckland University College : P. C. I. Crooks and (Miss) A. M. Greenwood. Leeds College of Art : H. Dove. Architectural Association : T. D. Goddard, C. J. E. Marshall and (Miss) M. J. White. Northern Polytechnic : F. H. Risdon. Edinburgh College of Art : J. Robertson. Welsh School of Architecture, Cardiff : I. G. Thomas.

Aboard the s.s. Patris II, which has just returned with the C.I.A.M. Congress from Athens. Top : Alvaar Aalto, the Finnish architect. Centre : Prof. Maholy-Nagy, whose film of the Congress was shown to the delegates during the return voyage. It is understood that, in the near future, he has plans for showing the film in London. Bottom : Functional footwear acquired in Athens by Hazen Sise, the Canadian delegate.

The late Maurice B. Adams

It is with deep regret we record the death of Mr. Maurice Bingham Adams, F.R.I.B.A. (retired), which took place at his home in Bedford Park, London, on Thursday last. For over fifty years Mr. Adams has rendered valuable service to the architectural profession. He was a past member of the Council of the R.I.B.A.

Born in 1849, he was articled to Mr. H. N. Goulty, of Brighton, and was afterwards an assistant to the late Sir William Emerson and Mr. Thomas Maynard, architect to the Brighton Guardians. Later, he was appointed architect to the Brighton Borough Council, under Mr. P. Lockwood, Borough Engineer. His chief work, however, was architectural journalism. He was editorially connected with the *Building News* from 1872 to 1923, and for over thirty years he conducted the *Building News* Designing Club. Moreover, for twenty-six years he was hon. secretary of the Royal Architectural Museum, and was also an examiner for the national competitions in art at South Kensington. He became an Associate of the R.I.B.A. in 1876, and a Fellow ten years later.

In addition to the above-mentioned posts, Mr. Adams also carried out a good deal of architectural work, including public libraries at Shepherd's Bush, Edmonton, Acton, St. George's-in-the-East, Shoreditch, Camberwell, Eltham—the last part of a scheme for town hall, public baths, public offices and electricity station ; Chiswick School of Art ; public baths at Camberwell and Kingston ; South London Art Galleries extension (Lord Leighton Memorial) ; Polytechnic, Peckham Road ; London School of Economics, Clare Market ; National Burglary and Fire Insurance Offices, E.C. ; completion of St. Michael's and All Angels' Church and Chapel of All Souls and Parish Hall, Bedford Park ; the restoration of Blickling Hall, Norfolk ; War Memorials at Hollybourne (Hants.), Springfield (Essex) ; Tottenham and Hammersmith Parish Church ; and a large amount of domestic work, including groups of cottages at Port Sunlight for Messrs. Lever. He was also responsible for the design of some houses and a monument to the Hon. John Frazer of Sydney, New South Wales, and a railway station and houses in New Jersey, U.S.A.

His publications included *Sketches for Cottages* (with R. Norman Shaw, A.R.A.) ; *Conservatories and Greenhouses* (with E. W. Godwin, F.S.A.) ; *Artists' Homes ; Old English Homes and Mansions ; Modern Cottage Architecture ;* Papers before R.I.B.A., A.A., and Provincial Architectural Societies, Carpenters' Hall ; *Architectural Illustrations ; Architectural Drawing ; Art in the Conservatory and Greenhouse ; Drainage Scheme and Restoration, Blickling Hall, Norfolk ; Public Libraries ; As to the Making of Architects ; Architectural Journalism ; Architects from George IV to George V ; Art and Everyday Life ; Cottage Housing : Its Economic Limitations and Distinctive Character ;* and *Insurance of Ecclesiastical Buildings.*

Mr. Adams retired from the Fellowship of the Institute in 1925.

Sir Reginald Blomfield, in *The Times* for August 18, said : " Adams was a thoughtful and intelligent man, keenly interested in architecture, who perhaps de-

Sir Banister Fletcher, PP.R.I.B.A., and his bride (formerly Mrs. Mary Louise Hazell) leaving Marylebone Registry Office after their marriage last Friday.

served a greater measure of success than fortune allowed him."

The burial took place at Chiswick Parish Church on August 19.

COMPETITION NEWS

BELFAST SANATORIA COMPETITION

Arrangements are almost completed for the Belfast Sanatoria extension competition, which is open to members of the Royal Society of Ulster Architects (writes our Irish correspondent). Mr. R. S. Wilshere, M.C., A.R.I.B.A., P.A.S.I., architect to the Belfast Education Committee, who has been appointed assessor, has submitted his plans for the competition to the Tuberculosis Committee of the Corporation, and these have now been approved. Further progress, however, has been deferred for a few days owing to the necessity of having a clause of the schedule scrutinized by the Corporation's Law Department. The sanatoria to be extended are Whiteabbey and Graymount, the former to involve an expenditure of from £65,000 to £70,000 and the latter from £12,000 to £13,000. It is stipulated that wherever possible Ulster materials shall be used.

The competition has aroused keen interest in Ulster architectural circles, and it is understood that the younger members of the profession will be well represented in the designs to be submitted.

Competitions Open

September 1.—Sending-in Day. Proposed Hospital at Surbiton. Assessor : C. E. Elcock, F.R.I.B.A. Premiums: £120, £75, £50 and £25. The conditions, obtainable from A. C. C. Dunn, Hon. Secretary, Surbiton Hospital, St. James's Road, Surbiton, were reviewed in *A.J.* for May 24.

September 11.—Sending-in Day. The Directors of Gidea Park, Ltd., invite designs for five different types of house (ranging from £400 to £900). Assessors : Prof. S. D. Adshead, F.R.I.B.A., A. E. Beresford, F.R.I.B.A., Ald. Ewart G. Culpin, F.R.I.B.A., E. Maxwell Fry, A.R.I.B.A., Howard Robertson, F.R.I.B.A., and W. Harding Thompson, F.R.I.B.A. In addition to being paid a fee according to the scale of charges of the R.I.B.A., the authors of the first five selected designs in each class will be paid a premium of £10. Particulars obtainable from Gidea Park, Ltd., The Estate Office, Hare Street, Gidea Park, Romford, Essex. Deposit 5s.

September 21.—Sending-in Day. Proposed Town Hall for the Borough of Hornsey. Assessor : C. Cowles-Voysey, F.R.I.B.A. Premiums : £350, £250 and £150. Full conditions, etc., were published in our issue for May 17.

September 30.—Competition for speculative house designs, organized by the Architectural Association with the co-operation of Messrs. J. Laing and Sons, Ltd. Three types of house are required. Assessors : C. Lovett Gill, F.R.I.B.A. ; L. H. Bucknell, F.R.I.B.A. ; J. R. Leathart, F.R.I.B.A. ; Arthur W. Kenyon, F.R.I.B.A. ; T. Alwyn Lloyd, F.R.I.B.A. ; and J. W. Laing. Premiums : £25 for the design placed first in each group. Copies of the conditions are being issued free, on application, to all members of the Architectural Association, and members of the R.I.B.A. can obtain copies (price 2s. 6d.) from Mr. F. R. Yerbury, General Secretary, The Architectural Association, 34-36, Bedford Square, W.C.1. Full particulars of the competition were published in *A.J.* for July 27.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor : H. S. Goodhart-Rendel, F.R.I.B.A. Premiums : £150, £100 and £50. Conditions have not yet been drawn up.

Development of the coastguard site, Bexhill. Assessor : T. S. Tait, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor : R. S. Wilshere A.R.I.B.A. Conditions are now being drawn up by the assessor.

Decoration of a café-restaurant. Assessors : G. Grey Wornum, F.R.I.B.A. ; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums : 50 guineas, 15 guineas and 10 guineas. Conditions governing the competition, which closes on December 15, 1933, will be issued on September 30 next.

THIS ARSHETECTURE

I. R. A.

" I had a communication from Sir Edwin Lutyens asking me to bring to the notice of my council his proposal to set up his new institute," said Major Barnes. " As I cannot see that the I.R.A. could do anything that is not being done by my council, and since the modern tendency is to amalgamate existing organizations rather than to create new ones, I wrote expressing my personal opinion that the I.R.A. is not necessary, and asking architects to suspend any decision to join it."—*Daily Telegraph.*

It would be a real test of his strength if he brought members of the I.R.A. who are well known to possess large quantities of firearms before his tribunal with the same impartiality that will be shown toward members of other bodies.

What is happening is that all weapons held on licence are now being called in, but for the large stocks of weapons held without permit by the I.R.A.—*Manchester Guardian.*

I have been warned that membership of the I.R.A. is incompatible with that of the R.I.B.A.—Letter in *Architect and Building News.*

. . . that supreme act of nationalist madness may be perpetrated to satisfy the crazy obsessions of a fanatic and the black hatreds of the I.R.A.—*Daily Telegraph.*

. . . chief of these the dread felt by the higher clergy of the Communist sentiment with which the I.R.A. is undoubtedly permeated. — *Week-End Review.*

STATE OF NEW YORK BOARD OF HOUSING

*[Following on the extracts we gave in our last two issues from the Report of the Departmental Committee on Housing, with the Committee's reasons for rejecting the scheme for a National Housing Board for Great Britain as proposed by Sir Raymond Unwin, we give below extracts from the annual Report, just published, of a Housing Board on very similar lines which actually exists in the United States of America.—*ED., *A.J.*]

ONE-HALF of the total construction in New York City is in the field of residential building. It is this branch of the industry with which we are particularly concerned. The Board has shown that one of the prime defects of the realty structure is the fact that it is geared to meet the requirements of only one-third of the population. Operating within a market of relatively narrow limits, it is not long before the industry overshoots its mark. The high costs of speculative operation condition the size of the market for residential construction. When 6 per cent. interest rate is charged on first mortgages by banks and insurance companies, and 9 to 15 per cent. interest rates are paid to second mortgagees, when bonuses and other financing costs are demanded for loans, and when renewal fees are the regular practice of lending agencies, rentals of new apartments must exceed the ability of most families to pay.

It is instructive to see the difference in rents between Housing Board financing and that of commercial practice. We must not stop a building programme because of the excesses that have resulted from previous speculative ventures. We cannot allow tens of thousands of families to starve until the Building Industry catches up with itself. Labour cannot wait much longer. It appears to be forgotten that bad housing has existed in good times and in bad times. If there was a need for good housing at low rentals three years ago, there is at least as great a need for it today. Our houses have not become better ; they have become older since 1929. The failure of the industry to come to grips with the great social problem of housing during periods of prosperity should only warn us against counsels of despair.

A state programme that aims to promote a vital social objective with far-reaching consequences for the civilized growth of our cities and the health of our people cannot be permitted to default because of the unimaginative grasp of the housing problem by men who are controlled by fears and by groups whose immediate interests are said to be affected, even though in reality there is little ground to support such fears.

Stability Under the Housing Law

The Housing Law seeks to strike at the fundamental forces that are responsible for the violent changes in the Building Industry. It seeks to introduce into at least a segment of the industry order and stability in place of reckless expansion and little concern for the future. It aims to bring about a closer correlation between production and need, thus assuring a firmer basis for building operations. The law attempts to achieve these objectives in several ways. When plans are submitted, they are examined from the point of view of the highest standards that can be obtained and the lowest rentals that can be achieved. Only those projects are approved that will have a beneficial effect upon surrounding properties. The lay-out of the development and the planning of the buildings are such that the project will not be swamped by any unfortunate developments in the neighbourhood. The financial hazards resulting from poor planning are eliminated by the Board's careful scrutiny.

The financial set-up under the Housing Law must be such that the speculative features of commercial enterprise are eliminated. The project must represent a point of view of investment. The properties are not erected for sale. The original investment remains in the project subject to gradual retirement with permission of the Board. The basis of capitalization is fixed by the Board and the return is limited to a maximum of 6 per cent. Any hopes of realizing on land increments upon dissolution of a project are destroyed by that provision of the law which requires that any surplus above the par value of the stock shall be returned to the State.

Financing costs are eliminated and the lowest rates of interest are sought for proposed developments to facilitate obtaining the lowest rentals. Care is taken to see that adequate reserves are set aside to meet amortization payments and costs of renovation. The annual and quarterly statements required of each limited dividend company enable the Board to check on the efficiency of operations.

The best evidence of the stability of building operation under the Housing Law is to be found in the financial statements of the corporations under the Board's jurisdiction. In a year of great distress in real estate, reports of these limited dividend corporations make a most creditable showing.

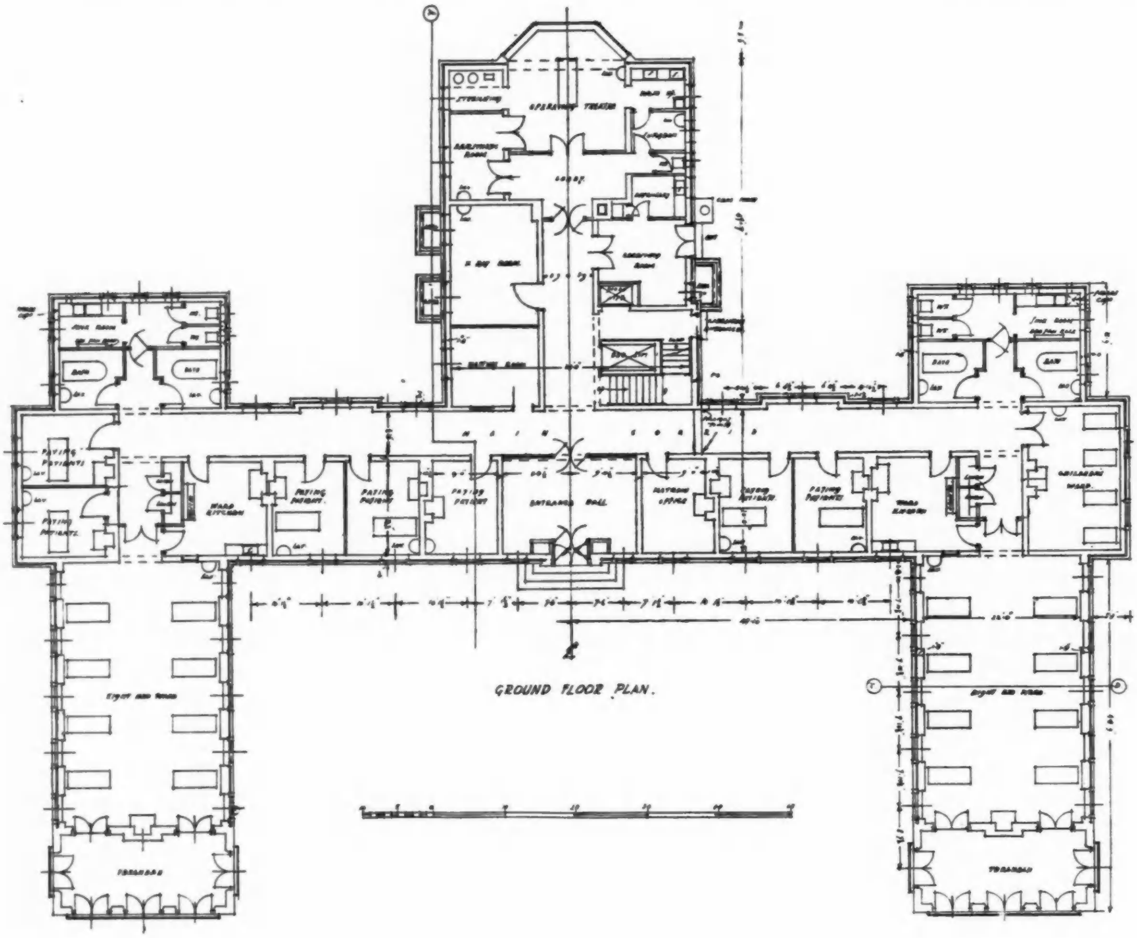
Five Years' Operation of the Amalgamated Housing Corporation

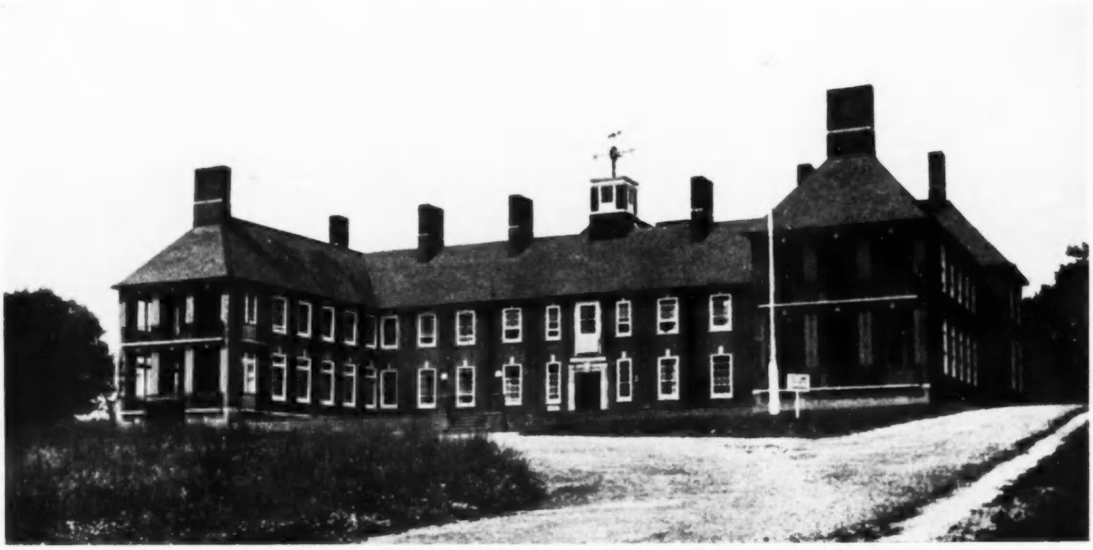
The Amalgamated Housing Corporation is the largest housing project under the Board's supervision. The operating costs of this co-operative housing venture should be particularly interesting.

The fixed charges, which included interest, depreciation, taxes and insurance, averaged $7.06 per room per month. The total operating charges, which included wages, fuel, painting, administration, etc., averaged $3.50 per room per month over the five years.

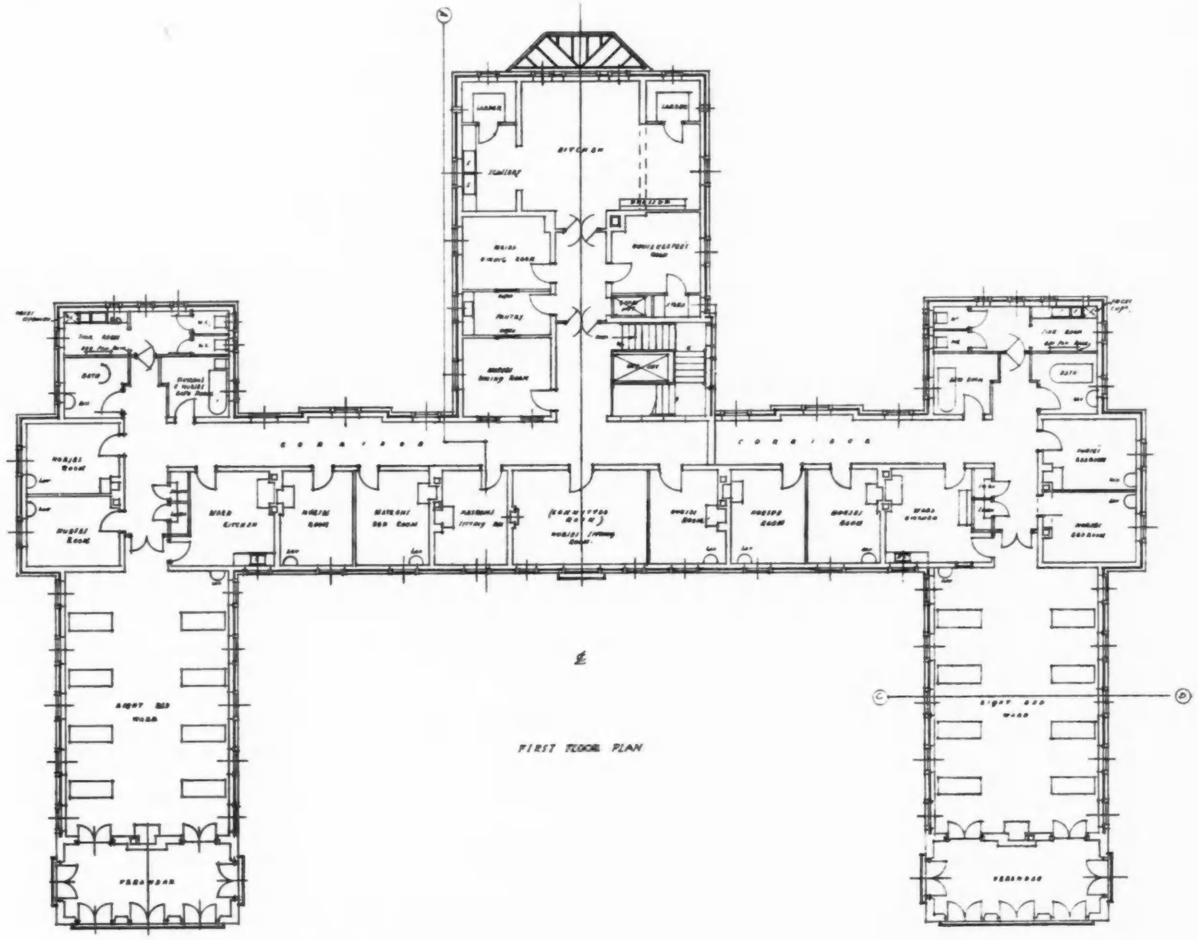
The most striking fact is the effect of increasing size of operations upon the trend of operating costs. The Amalgamated Housing project more than doubled in size during the years 1928 to 1932. In 1932 there were 627 apartments containing 2,441 rooms as against 308 apartments with 1,185 rooms in 1928. The expense for wages decreased from $1.47 per room per month in 1928 to 74 cents in 1932 ; fuel declined from $1.46 to 68 cents, and the cost of administration from 50 cents to 30 cents. In other words, in five years the wage and fuel bills per room per month were each cut about 50 per cent. and the expense for administration per room per month decreased by 40 per cent.

HOSPITAL AT BEXHILL: DESIGNED


STERILIZING
OPERATING THEATRE
ANAESTHETIC ROOM
LOBBY
X RAY ROOM
RECOVERY ROOM
BATHING ROOM
MAIN CORRIDOR
SINK ROOM
BATH
LAV
W.C.
PAYING PATIENTS
WARD KITCHEN
PAYING PATIENT
ENTRANCE HALL
MATRON'S OFFICE
CHILDREN'S WARD
EIGHT BED WARD
VERANDAH
GROUND FLOOR PLAN.



BY ADAMS, HOLDEN AND PEARSON


LARDER
LARDER
KITCHEN
SCULLERY
MAIDS DINING ROOM
HOUSEKEEPERS ROOM
PANTRY
NURSES DINING ROOM
CORRIDOR
CORRIDOR
NURSES ROOM
NURSES ROOM
BATH
BATH
WARD KITCHEN
MATRONS BED ROOM
MATRONS SITTING RM
(COMMITTEE ROOM) NURSES SITTING ROOM
WARD KITCHEN
EIGHT BED WARD
EIGHT BED WARD
VERANDAH
VERANDAH
C
D

FIRST FLOOR PLAN

This building provides a complete hospital service under one roof, comprising medical, surgical and children's wards, private patients' wards, X-ray department and operating suite. It stands on a site about one mile from the sea, sloping towards the south, with space on the west for future extensions. It is intended later to build a separate nurses' home.

The ground floor provides accommodation for two eight-bed surgical wards, male and female, with sun balconies, a children's ward of four beds, and seven private patients' rooms, each with a fireplace and fitted lavatory basin.

On the first floor are two eight-bed wards similar to those on the ground floor, for medical cases, together with the staff accommodation and kitchens.

The elevations are faced in local stock bricks. The windows are double hung sashes, painted white, with stone key-stones and cills. The floors of the wards are covered with teak blocks, the corridors and staircases with rubber flooring, and the sanitary annexes with terrazzo. The kitchen floor is of red adamantine tiles.

LETTERS FROM READERS

ICONOCLAST

RICHARD C. BALL, L.R.I.B.A.

D. G. DENOON

Architecture as a Trade

SIR,—Mr. Harold Falkner's letter is an amusing argument in favour of the proposals Mr. Martin Kaye and myself have put forward. His paragraph: "No one .... cares a gnat's eyebrow who is or who is not on the Council, or whether the Council consists of ten or a thousand members"—exactly expresses why we believe a more live system of representation is necessary.

Mr. Falkner refers to the "overweening confidence and assurance derived from the holding of a diploma." Yet I note, on reference to the *Kalendar*, that Mr. Falkner holds one himself, and apparently places a value upon it of at least five guineas per annum (unless he is falling in arrears). I do not think he need fear his "ungraciousness" to the Institute, but I do suggest that he is shockingly careless of his money, which he presumably continues to subscribe to an "hallucination."

ICONOCLAST

Universal House

SIR,—Why not start an Engineering Supplement to which this building would seem rightly to belong?

If its self-conscious functional beauty is so striking, why take one of its photographs from such a curious viewpoint, it would seem with the object of deceiving the uncritical?

"Man doth not live by bread alone." Should not architecture give cultural taste to the bread of engineering.

RICHARD C. BALL

The Frustrated Schoolmaster

SIR,—The review by "An American in England" in your issue for August 10 relating to certain well-known publications about English mediæval sculpture, is most unsatisfactory.

While admitting that England is the best place to live in, the reviewer takes to task the authors of these books because they describe the mediæval effigies and sculptures as historical material rather than as works of art. Surely without such books, which can only be produced after years of research and classification, we should have little opportunity of knowing where such effigies are to be found and of forming our own judgment about their artistic value.

Possibly I am classed with "the frustrated schoolmaster," but why the reviewer wants to burn all fine mediæval sculpture because the modern artist does not appreciate works that give joy to antiquarians I entirely fail to understand.

Having been a regular reader of your JOURNAL for more years than I care to mention, I can only say that this review is an extremely poor way of telling your readers about works that have a definite value; but then, I never could understand the American language.

Why not turn your reviewer loose on Mr. Nathaniel Lloyd's *History of the English House* and thus let us learn why the stately (and humble) homes of our ancestors should be burned down because the ultra-modern architect does not build the sort of houses that our forefathers used to make.

D. G. DENOON

The Institute of Registered Architects

The formation of the above Institute raises questions on which the opinion of members of the architectural profession is of fundamental importance. In order to arrive at some estimate of professional opinion on this subject we submitted the following questions to a number of architects:—

1: Do you consider that the formation of the Institute of Registered Architects is of value to the profession?

2: Why?

3: Do you consider that it will adversely affect any other recognized architectural institutions?

4: Do you think that the work which the Institute of Registered Architects proposes to do as set out in its manifesto could be equally well done by existing bodies (i.e., R.I.B.A., I.A.A.S., the Registration Council, etc.)?

Below we print a number of replies that we have received.

J. E. DIXON-SPAIN, F.R.I.B.A.

I am of opinion that the formation of an Institute of Registered Architects is of no value to the profession. The existing bodies are sufficiently numerous.

As to adverse effect on other recognized institutions, I cannot suppose this would be considerable, but the promotion of disunion must be an ill-service all round.

The work set out in the manifesto issued, and indeed all other work in the interests of architects and architecture could, and without doubt will be done more effectively by the R.I.B.A.

R. E. ENTHOVEN, F.R.I.B.A.

1: No.

2: Because the prestige of the profession can only be raised by a body composed of genuine architects led by architects of distinction. The I.R.A., owing to the form registration has taken, is obliged to open its doors to as many goats as sheep.

3: Yes, certainly at the moment, by introducing confusion rather than unification.

4: Yes. Anyway, the R.I.B.A., which has the Royal Charter, could do this work, especially if all genuine registered architects would realize the reason for joining that body. The bogus ones would be better out of the way in either case.

W. S. PURCHON, A.R.I.B.A.

(Principal, Welsh School of Architecture)

The circulars with reference to the Institute of Registered Architects remind me that some eighteen months ago, at a meeting attended by a number of architects, I drew attention to the uses to which the initials of the words "Registered Architect" might possibly be put. It was, no doubt, gratifying to me at the time that sounds suggestive of appreciation proceeded from certain of those present. But even as a jest this is obviously only trifling, and I feel sure that those who heard it would have been astounded could they have foreseen what appears to be an attempt to take it seriously in a slightly modified form.

Surely the best friends of Sir Edwin Lutyens (that well-known architect who has such a lively sense of humour) and the best friends of architecture would assure him that, joking apart, the best policy at the present time is a reduction, rather than an increase in the number of architectural institutes in this country.

The more closely we can be united, and the more completely our interests can be dealt with by the one great body, the R.I.B.A.—which for so many years has worked hard for high standards of professional attainment and conduct among its members—the better for the architects and the architecture of this country.

PERCY MORRIS, L.R.I.B.A., M.INST.M. & CTY. ENG., F.R.SAN.I.

(Architect to the City of Wakefield Corporation)

1: Yes.

2: To protect as fully as possible the interest of all Registered Architects, and enable those members of the profession not attached to the R.I.B.A. and I.A.A.S. to have a voice in securing amendments to the Architects (Registration) Act.

3: No.

4: No.

T. LAWRENCE DALE, F.R.I.B.A.

The whole history of architecture displays no incident so deplorable.

OLIVER LAW, A.R.I.B.A.

1: I do not consider the formation of a new Institute is of value to the profession and, further, I consider it to be definitely superfluous and harmful.

2: Before the Registration Bill became law it was regarded as necessary for every practising architect to have some means of collective representation, and, with this object in view, unification was introduced, and in addition, the R.I.B.A. opened the Licentiate class. At the same time, the various Allied Societies made it known that they would gladly welcome any "bona fide" architects, whether they were attached or not to an existing professional organization. In this way it would appear to me that no architect, other than a person of doubtful qualifications or repute, can possibly find himself in a position of complete isolation.

3: It cannot be denied that there are few architects of eminence outside the R.I.B.A., and, therefore, it is entitled to the foremost position in the profession. In temporarily opening its doors for the benefit of those practising architects who are not already members, the R.I.B.A., to some extent, sacrificed for a time the high standard previously maintained, but did so, realising that the lowered standard would be for a time only, and that by ultimately closing the doors they would be in a position to see that the proper dignity and competence of the profession was established.

The formation of another Institute gives no guarantee that an equally high standard would be required, and I fail to see what purpose could be served by a member of the R.I.B.A. belonging to another Society in addition, other than the collection of an affix.

It is equally obvious that the formation of a new Institute is bound, to some extent, to clash with and weaken the parent body.

4: I do not consider that any work that can be done by a new Institute cannot be equally well, or better, done by one of the existing bodies.

R. TAUNTON BOUTALL, A.I.A.A.

1: I *do* consider that the formation of the Institute of Registered Architects is beneficial to the profession.

2: My reason for this opinion is that I consider it is time for an Institute to be founded by such a pioneer in our profession as Sir Edwin Lutyens, who, I feel sure, would recognize and endeavour to appreciate the views of the younger members of our profession on modern design, even should they not be in keeping with his own. I speak as a member of this younger generation and I know that it is felt, not only by myself but by many others, that the R.I.B.A. is only of use to enable a young man to obtain a position in the average unenterprising architect's office. By the use of the word unenterprising I wish to infer a man chiefly interested in the technical part of architecture, which should be left to the men who are capable of dealing with it, such as engineers and surveyors; it being well known in the profession that the average architect knows little about heavy structural work and nearly always calls in a specialist in that particular branch. It is to be hoped that under Sir Edwin's new Institute architecture will regain its original status of an art.

3: I sincerely hope that the new Institute will force the recognized societies to pull their socks up and study progress instead of the tradition that is being used to dampen the imagination and enthusiasm of the younger architect.

4: With regard to this question I feel that the work would be done equally well if these various bodies took more notice of and welcomed the advice of some of the younger architects, such as Messrs. Howard Robertson, Joseph Emberton, Gordon Jeeves and many others of their school.

Regarding my own feelings: Ever since I was a student I have been opposed to a person taking examinations to become qualified in any of the Arts; qualification in subjects of this kind, in my opinion, can only be gained by years of hard work, experience, and good masters.

SYDNEY JAQUES, A.R.I.B.A.

1 and 2: I consider that the only value the profession can obtain from the formation of the proposed Institute of Registered Architects is that it will arouse the rank and file to a livelier interest in, and more definite support of, the R.I.B.A. and its allied organizations, which are working for the welfare of the profession as a whole.

3: I do not consider that the proposed Institute, if established, will affect the recognized architectural institutions in the valuable work they are doing on behalf of their members.

4: The proposals in the manifesto of the proposed Institute so far as they may be beneficial to the profession generally, can be far better carried out under the well established organization of the R.I.B.A. and allied bodies.

D. BIRCHLEY ALLINGHAM, A.I.A.A.

1: Yes.

2: Registered architects should have a representative body which would act independently of the existing architectural bodies.

3: No.

4: Not with a biased policy.

RODERICK A. FITTON, A.R.I.B.A.

1: I do not think the new society is of value to the profession as a whole.

2: I think its very formation at this stage will merely add to the already difficult state created by the formation of similar societies. Perhaps the only reason it should be given two minutes' thought is the fact that Sir Edwin Lutyens is at its head.

The ideals and aims of the registration proposal seem to me to be crippled at the outset by this very point of the opposition of so-called representative societies, who seem keener on preserving the practising rights of their easily acquired members, than the upholding of the ideal of sound, well-conducted, practise rules and methods.

3 : If it gains credence and support it may adversely affect the recognizedly sound architectural institution of which I am a proud and earnest member.

4 : Given the support it deserves the R.I.B.A. is quite capable of seeing to it that in course of time only those who have the clear right to practise shall be permitted to do so, and so relieve the profession from the stigma of having among its ranks people who are exploiting the art only for their personal benefit and gain, and with whom its high prestige is not safe.

PERCIVAL M. FRASER, F.R.I.B.A.

1, 2 and 3 : Such an institute would conceivably be of value to unqualified architects who rely on the ignorance and folly of a public who are impressed by "a string of letters." To the enlightened, this multiplicity is ridiculous and derogatory and it robs the two genuine qualifications, i.e., Associateship and Fellowship of the Royal Institute of whatever value they have left since the creation and constant inflation of the Licentiate class.

4 : I know of no work it could do beyond implementing the farcical punitive powers conferred under the Act.

The public view of trade unions is well known to be one of extreme distrust (as indeed it is of registration in any shape or form). The registration movement, therefore, was doomed to shameful failure from the beginning; but how ignominious even the most pessimistic could hardly have foreseen.

It irritated every section of the community in its passage through the House of Commons and, after enormous financial cost and lamentable loss of prestige to the Royal Institute, it produced an Act which must have mortified even Major Harry Barnes. It is already bearing fruit in further disruption to the profession.

L. L. DUSSAULT, F.R.I.B.A.

1 : No.

2 : The R.I.B.A. does all that is possible in the interest of all architects.

3 : Yes.

4 : Yes.

ARTHUR B. HAYWARD, L.R.I.B.A.

1 : Absolutely none.

2 : Membership of such an Institute would be redundant and futile, and confer no prestige.

3 : I should imagine it is not likely to receive sufficient support to have any serious effect; but any effect it will have will be, in my opinion, adverse to existing institutions.

4 : Certainly I do.

I am further of the opinion that the suggested new Institute is a most unfortunate move. I should like to see one, and only one, Society representing the whole profession, and obviously the R.I.B.A. is the best fitted for the purpose.

ARCHIBALD S. SOUTAR, L.R.I.B.A.

1 : No.

2 : There are already too many bodies attempting to "protect" members of the architectural profession. Amalgamation of those existing is, in my opinion, more desirable than an extension of their number.

3 : I believe that the effect of the formation of the proposed Institute will be to weaken the influence of existing bodies by creating an impression outside the profession that there is a lack of unity within it.

4 : It appears to me that the interests of Registered Architects are quite safe in the hands of the Registration Council.

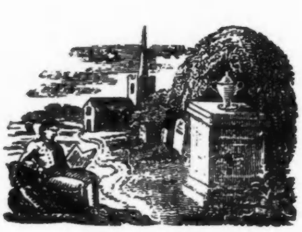
C. M. OLDRID SCOTT, A.R.I.B.A.

1 : None whatever.

2 : It's a "stunt."

3 : Not if it's treated as it should be.

4 : Yes, so far as it is desirable.



RE-HOUSING IN LIVERPOOL

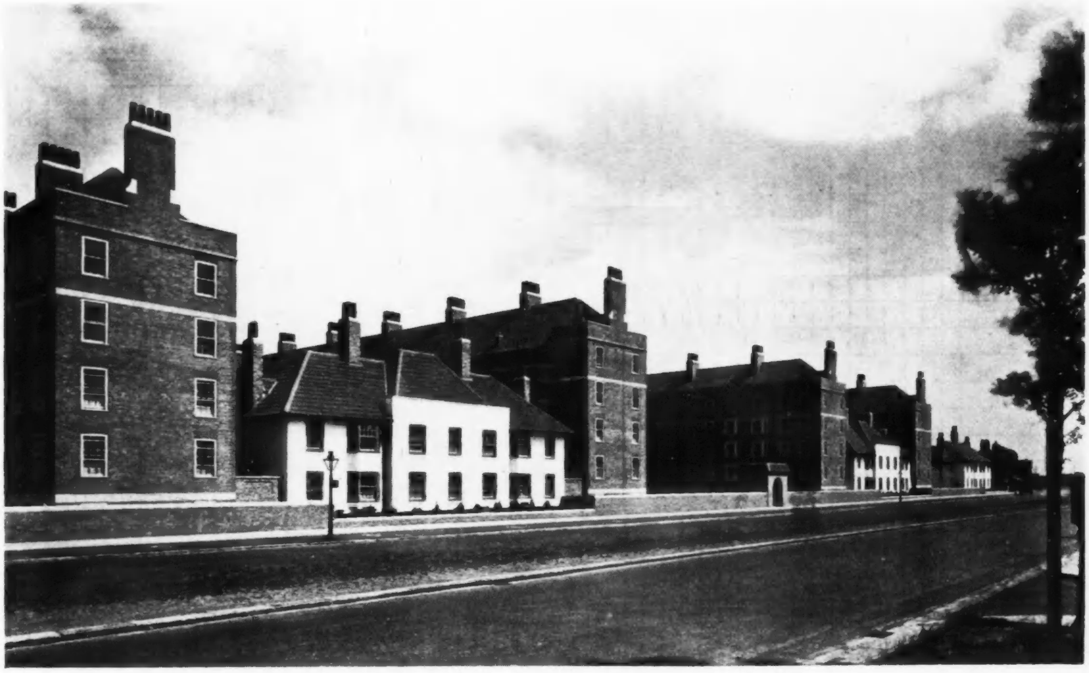
The Speke Road Tenements

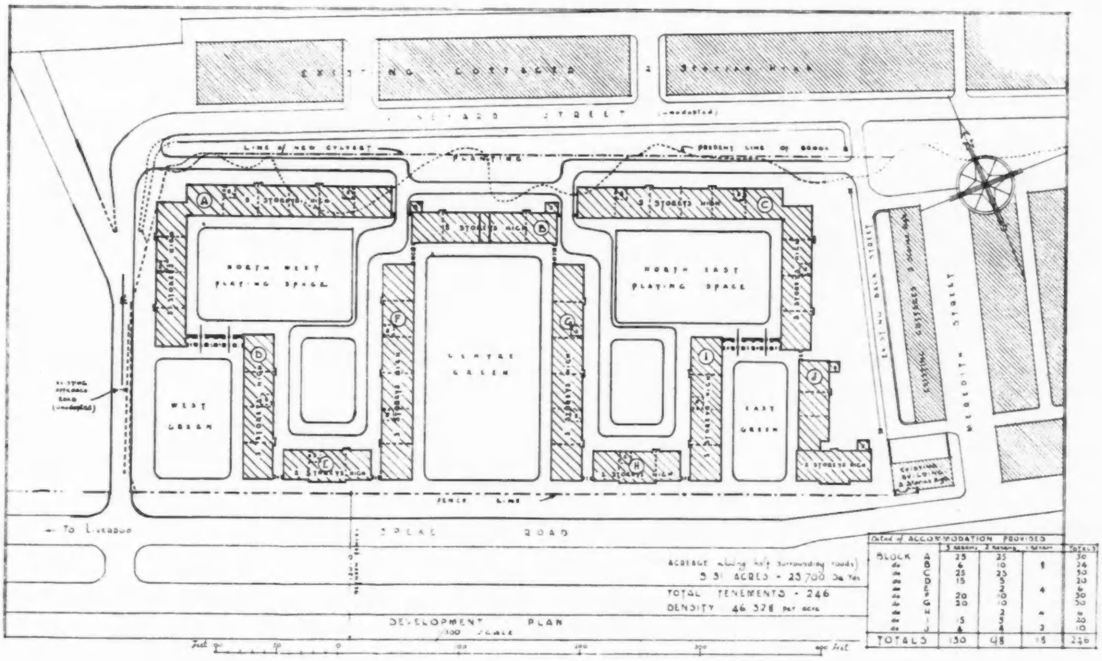
DESIGNED BY L. H. KEAY

AT the present time many local authorities are considering slum clearance programmes, as requested by the Minister of Health in the recent Circular 1331. In most cases the work which will be undertaken will be the demolition of groups of insanitary houses, leaving the cleared site available for future development, and the accommodation of the dispossessed in houses erected on available sites by the local authority. But in the large towns and cities the problem is more complicated. Many who will be dispossessed are living in residential islands in the commercial districts because their work is of such a nature as to make it impossible for them to move to the suburban areas. Whether they are to be rehoused in flats or in separate family houses, is a question that is being considered by many local authorities. There is in this country a prejudice against flats, but is it entirely justified? The most recent example of flat dwellings erected by the City of Liverpool should be of interest to anyone seeking information on the important subject of re-housing.

Apart from the London County Council no local authority has made such progress in slum clearance as the City of Liverpool, for before the war (and the existence of national contributions) a large number of insanitary areas had already been cleared in the city.

There has just been completed in Speke Road, on the outskirts of the city of Liverpool, a group of 246 tenements which are illustrated on the following two pages. Erected to relieve the overcrowding in the Garston district of the city, for the first time re-housing accommodation has taken the form of flats instead of cottages on a site situated almost within a stone's throw of thousands of acres of agricultural land. It may well be asked what prompted this unusual development; for flats are generally considered, on account of their cost, to be



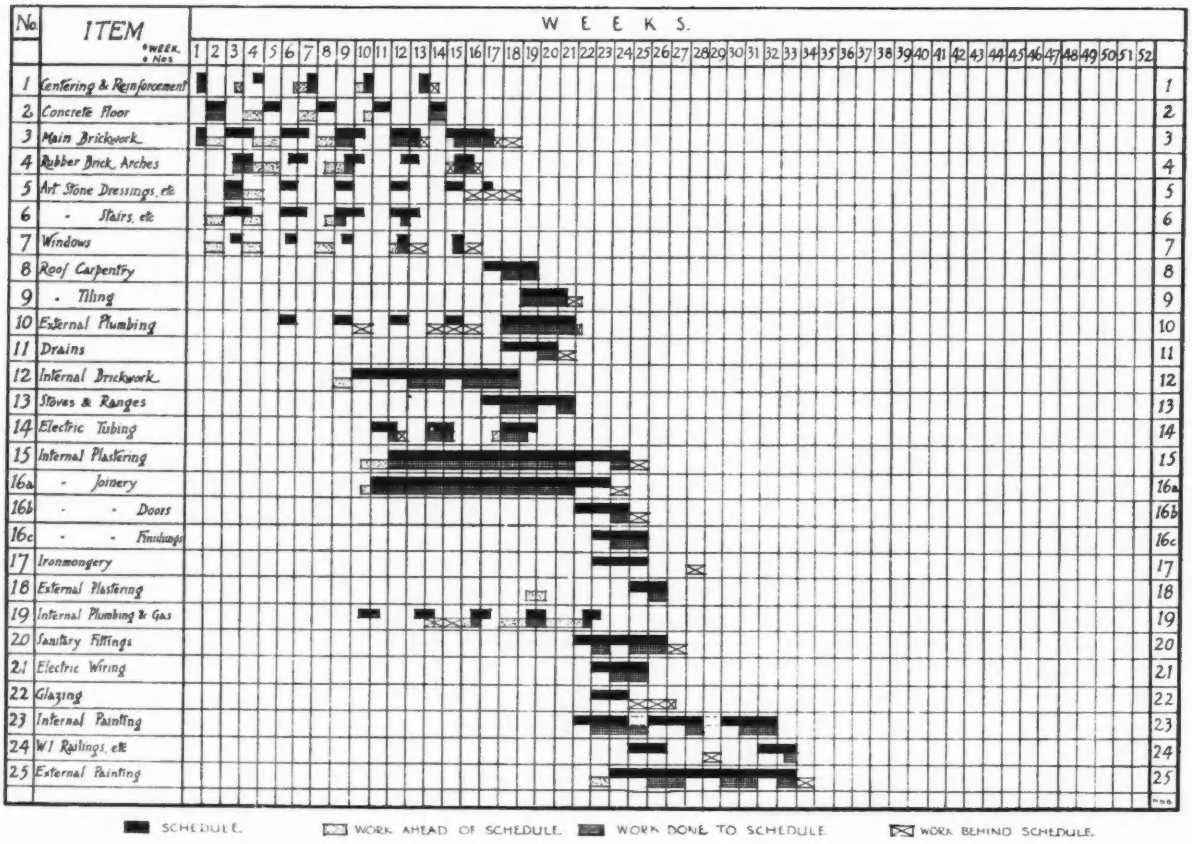

EXISTING COTTAGES 2 STOREYS HIGH
STREET (unadopted)
LINE of NEW CULVERT
PLANTING
PRESENT LINE OF BROOK
A 5 STOREYS HIGH
B 5 STOREYS HIGH
C 5 STOREYS HIGH
NORTH WEST PLAYING SPACE
NORTH EAST PLAYING SPACE
CENTRE GREEN
WEST GREEN
EAST GREEN
D E F G H I J
2 STOREYS HIGH
EXISTING COTTAGES 2 STOREYS HIGH
BACK STREET
MEREDITH STREET
EXISTING BUILDING 2 STOREYS HIGH
EXISTING ACCESS ROAD (unadopted)
FENCE LINE
← To LIVERPOOL
SPEKE ROAD
ACREAGE (including half surrounding roads)
5.31 ACRES = 25,700 Sq. Yds.
TOTAL TENEMENTS - 246
DENSITY 46.328 per acre
DEVELOPMENT PLAN
1/500 SCALE
Feet 50 0 50 100 200 300 400 feet
Table of ACCOMMODATION PROVIDED
3 rooms | 2 rooms | 1 room | TOTALS
BLOCK A 25 25 50
do B 6 10 8 24
do C 25 25 50
do D 15 5 20
do E 2 4 6
do F 20 10 30
do G 20 10 30
do H 2 4 6
do I 15 5 20
do J 4 4 2 10
TOTALS 130 98 18 246

The photograph on this page shows the frontage to Speke Road of the tenements at Liverpool, which are the subject of the article on the facing page.

As the lay-out plan shows, the five-storey blocks of flats are built at right angles to the main road, enclosing courtyards which are used as garden spaces. As the main road runs east and west, all the rooms facing these courtyards obtain sunlight during part of the day.

Golden-brown facing bricks with red sand-faced dressings have been used generally throughout the scheme, with mortar joints of a yellow colour. In the case of the two-storey tenements, which fill the spaces between the higher blocks, the brickwork has been colour-washed. Colour-washing has also been used for the underside of the balconies and for the back walls down to cill level. The woodwork is painted in bright colours, including scarlet, leaf-green, royal blue and orange. The blocks are linked together by arcaded walls.

TENEMENTS IN LIVERPOOL: PROGRESS CHART



A time and progress chart for one block of 30 flats, used in the erection of the Speke Road Tenements, Liverpool.

prohibitive if self-contained cottages can be built. Liverpool perhaps realized that there are many who do not desire a separate allocation of land, but are willing to share communal playgrounds and garden spaces, and that the flat need not exceed the cost of the self-contained cottage.

Early in 1932 the City Council decided to proceed with the erection of the 246 flats by direct labour at an estimated cost of £114,390, arrived at in competition with local and other builders. The period allocated for the completion of the works was 21 months, but at the end of 13 months the whole of the 246 tenements had been handed over ready for occupation, and at a price lower than shown by any post-war tenement scheme. Wherein lay the secret? Perhaps for the first time in a building of this nature in the City it was decided to follow a modification of the American system of time and progress schedules. A schedule for one of the blocks of flats is here reproduced. The whole of the work was similarly controlled, and undoubtedly this control led not only to the extraordinary reduction in the time required for the completion of the buildings, but also contributed to the lowering of the cost.

The average price of £384 per dwelling, or £111 3s. 7d. per habitable room, whilst being the lowest price recorded in Liverpool since the war is probably also the lowest for the whole country having regard to the type of building which has been erected. These figures include not only building costs but also for the lay-out of the courtyards, three gardens and children's playground, and provision of the private streets, sewering, etc., and for the lighting of the whole of the estate. The figures are the more remarkable when it is realized that in many cases foundations had to be taken to a depth of over 20 ft.

The buildings are a successful attempt to rehouse working class families, at the rate of 60 families to the cleared acre and provide, at the same time, ample light and air with playground and garden space.

It is understood that the erection of these flats was a definite test by the City Council which may have interesting repercussions not only in Liverpool but also in other towns faced with similar problems.

The designs for the whole scheme were prepared in the office of the Director of Housing for the City of Liverpool, Mr. L. H. Keay, F.R.I.B.A.

DESIGN AND CRAFTSMANSHIP

"INDIVIDUALITY and Expression in the Decorative Arts" was the subject of a paper read by Mr. William Aumonier at the annual conference of the Incorporated Institute of British Decorators recently held in London. Mr. Aumonier, in the course of his address, said:

Everyone must realize that the new school of modern architecture opens up entirely fresh fields of design and thought resulting in exceptional opportunities for the artist to express individuality in his work.

The success of the recent exhibition at Dorland House shows that there is a large public keen to appreciate individuality in craftsmanship. Yesterday's cold mutton hashed up for to-day's consumption is no longer good enough for the suffering client. This exhibition at Dorland House was the most marvellous achievement of British industrial art ever held in this country and showed the great strides that have been made in modern design and craftsmanship. It is, therefore, no use for the "Die-hard" traditionalist to decry modern decoration; it has come to stay, and will assuredly spread more and more as it gets better known and understood.

All associated with architectural decoration must realize that the advent and development of so many new materials—concrete, glass, laminated boards, rustless metals and electrical appliances—open up new possibilities and provide an entirely new aspect to decorative values. It must surely be obvious that some great change in style must be the outcome of adapting these new materials to modern requirements.

Another point is that the present economic situation and the high cost of all skilled labour are forcing the architect to explore new methods of expression on his buildings.

Hence we get this new school of decoration, of which the exhibition at Dorland House has been the culminating point; the individual craftsman has come into his own again, for it certainly takes greater imagination and inventiveness on the part of the artist to create something that has never been done before than merely to repeat dead echoes of the past. After all, we are living in a new world; the war scrapped all our preconceived ideas, and we have now to realize that nothing will ever be the same again.

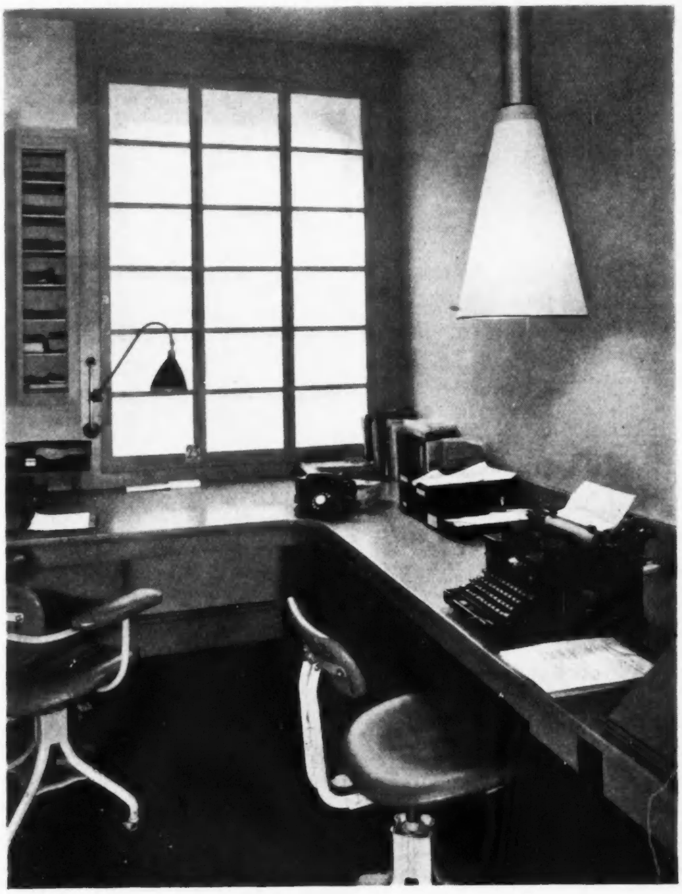
An artist is not a machine, and he should be free to express himself in his own way. I regret that an artist who dares to be original and to give expression to his own individuality should be so bitterly denounced by those who cannot or will not understand. Even if we do not approve of everything done by the modernist, we might still give some credit for sincerity of thought and purpose. Wren, Chippendale and the Adam brothers were modernists in their day, and it is undoubtedly to the glory of England that they were. If no one ever broke away from tradition, architecture and decoration would die of ennui.

I am not deriding tradition, for rightly interpreted it is a great jumping-off place for much that we call modern. What stultifies the work of the past is the machine reproduction in incompetent hands. Machinery has got into the wrong hands. The mechanic is in control and not the artist, and we go on reproducing the most dreadful types of carpets, floor-cloths, wall papers, furniture and pottery, etc., while the manufacturer excuses himself with the notion that this is what the public wants.

To produce a badly designed floor covering is just as immoral as to produce an indecent book: they both soil the mind, and just because the manufacturer or publisher finds there is a market for such trash, there is no reason why the public should have to endure and put up with such abominations.

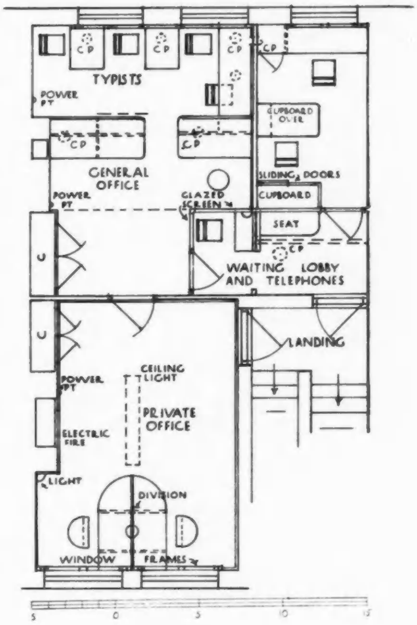
I do not believe the public is as stupid as the manufacturer believes.

A FILM COMPANY'S OFFICES

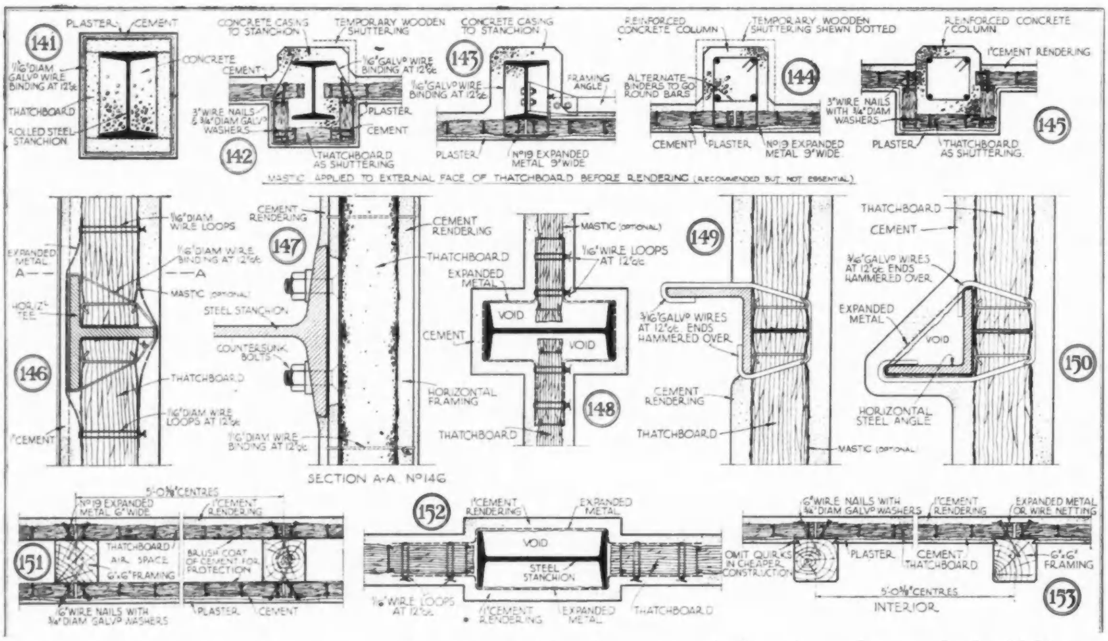


These offices, in Denmark Street, London, for Steuart Films, Ltd., have been remodelled by Mr. Rodney Thomas. The plan shown is of the office floor. A projection theatre (a photograph of which forms the frontispiece to this issue) and workshops are in the basement.

All the fittings in the offices are constructed in wallboard, sprayed with cellulose to a blue-grey finish. The walls are plastered, and the partitions are formed of sheets of wallboard, fixed to studding and painted. The ceiling lights are of cartridge paper, cellulosed, and are removeable and washable. The doors are of mahogany plywood.



DESIGNED BY RODNEY THOMAS


141
PLASTER
CEMENT
CONCRETE
1/16" DIAM GALV^D WIRE BINDING AT 12"c/c
THATCHBOARD
ROLLED STEEL STANCHION
142
CONCRETE CASING TO STANCHION
TEMPORARY WOODEN SHUTTERING
CEMENT
1/16" GALV^D WIRE BINDING AT 12"c/c
3" WIRE NAILS & 3/4" DIAM GALV^D WASHERS
PLASTER
CEMENT
THATCHBOARD AS SHUTTERING
143
CONCRETE CASING TO STANCHION
1/16" GALV^D WIRE BINDING AT 12"c/c
FRAMING ANGLE
PLASTER
Nº19 EXPANDED METAL 9" WIDE
144
REINFORCED CONCRETE COLUMN
TEMPORARY WOODEN SHUTTERING SHEWN DOTTED
ALTERNATE BINDERS TO GO ROUND BARS
CEMENT
PLASTER
Nº19 EXPANDED METAL 9" WIDE
145
REINFORCED CONCRETE COLUMN
1" CEMENT RENDERING
3" WIRE NAILS WITH 3/4" DIAM WASHERS
PLASTER
THATCHBOARD AS SHUTTERING
MASTIC APPLIED TO EXTERNAL FACE OF THATCHBOARD BEFORE RENDERING (RECOMMENDED BUT NOT ESSENTIAL)
146
EXPANDED METAL
A — — — A
1/16" DIAM WIRE LOOPS
1/16" DIAM WIRE BINDING AT 12"c/c
MASTIC (OPTIONAL)
HORIZ^L TEE
THATCHBOARD
1/16" DIAM WIRE LOOPS AT 12"c/c
1" CEMENT
147
CEMENT RENDERING
CEMENT RENDERING
THATCHBOARD
STEEL STANCHION
COUNTERSUNK BOLTS
HORIZONTAL FRAMING
1/16" DIAM WIRE BINDING AT 12"c/c
SECTION A-A. Nº146
148
MASTIC (OPTIONAL)
1/16" WIRE LOOPS AT 12"c/c
EXPANDED METAL
CEMENT
VOID
VOID
THATCHBOARD
149
3/16" GALV^D WIRES AT 12"c/c ENDS HAMMERED OVER
CEMENT RENDERING
THATCHBOARD
MASTIC (OPTIONAL)
150
THATCHBOARD
CEMENT
3/16" GALV^D WIRES AT 12"c/c ENDS HAMMERED OVER
EXPANDED METAL
VOID
HORIZONTAL STEEL ANGLE
151
5'-0⅜" CENTRES
Nº19 EXPANDED METAL 6" WIDE
1" CEMENT RENDERING
THATCHBOARD
AIR SPACE
6"x6" FRAMING
BRUSH COAT OF CEMENT FOR PROTECTION
1/16" WIRE NAILS WITH 3/4" DIAM GALV^D WASHERS
PLASTER
CEMENT
152
1" CEMENT RENDERING
EXPANDED METAL
VOID
STEEL STANCHION
1/16" WIRE LOOPS AT 12"c/c
1" CEMENT RENDERING
EXPANDED METAL
THATCHBOARD
153
6" WIRE NAILS WITH 3/4" DIAM GALV^D WASHERS
1" CEMENT RENDERING
EXPANDED METAL OR WIRE NETTING
OMIT QUIRKS IN CHEAPER CONSTRUCTION
PLASTER
CEMENT
THATCHBOARD
6"x6" FRAMING
5'-0⅜" CENTRES
INTERIOR

The constructional use of acoustical materials in framed buildings.

LITERATURE

ACOUSTICS

Practical Acoustics for the Constructor. By C. W. Glover, L.R.I.B.A., A.M.INST.C.E. London: Chapman and Hall. Priec 25s. net.

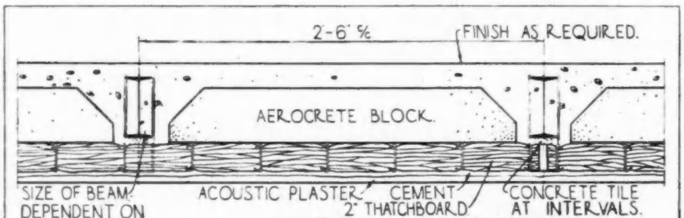
THE author of this book is lecturer on acoustics at the Regent Street Polytechnic, London, and he has arranged his book as a series of progressively more specialized chapters in a form suitable for a course of lectures, with the simpler acoustical phenomena demonstrated by experiments and with each chapter summarized in questions at the end.

He covers the whole field of architectural acoustics, beginning in the earlier chapters with the general principles of wave-motion, reflection, interference, absorption and reverberation, and proceeding on to such special problems as the acoustical design of theatres and film and broadcasting studios, the placing of organs and the suppression and insulation of aircraft noise.

The book is very systematically planned, with the data given wherever possible in graphic or diagrammatic form, and is in consequence rapid and convenient of reference.

The author has realized that acoustic problems arise in even the simplest piece of building, and has not merely treated the subject as an abstruse science that has to be taken into account by the designer of civic opera houses. Every material used in a building has its own acoustic qualities, in many cases quite as important as its qualities of weight or stability. He has therefore devoted a sensibly large proportion of the book to the consideration of the common problems of sound transmission and insulation, and to practical guidance on sound insulation in steel-framed and reinforced concrete buildings, the elimination of noise from ventilating, heating and electrical installations and lifts, and machinery vibration. He gives clearly drawn suggestions as to methods and materials of sound-proofing, accompanied by suitable specification clauses.

The most interesting part of the book, however, is the Appendix. It consists

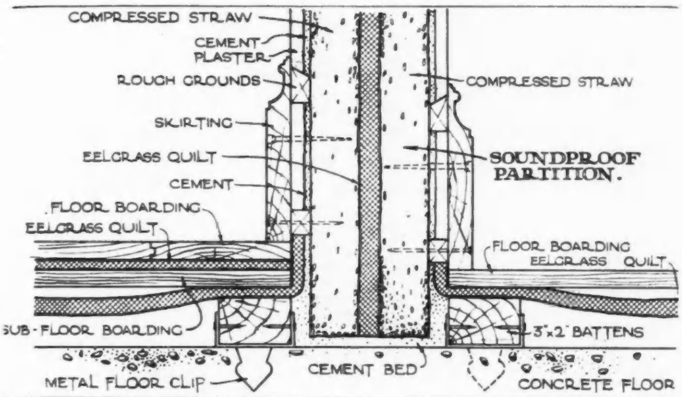

2'-6" ⅝
FINISH AS REQUIRED.
AEROCRETE BLOCK.
SIZE OF BEAM DEPENDENT ON LOAD & SPAN
ACOUSTIC PLASTER
CEMENT
2" THATCHBOARD
CONCRETE TILE AT INTERVALS.
2'-6" ⅝
CONCRETE DEPTH AS REQUIRED.
2" THATCHBOARD
HOLLOW CLAY TILE
ACOUSTIC PLASTER
CEMENT
HOLLOW CLAY TILE
1'-3" ⅝
1'-3" ⅝
GALV WIRE STIRRUPS.
2" THATCHBOARD
ACOUSTIC PLASTER
CEMENT

Fire-resisting floor construction in which an acoustical material is used as permanent shuttering.

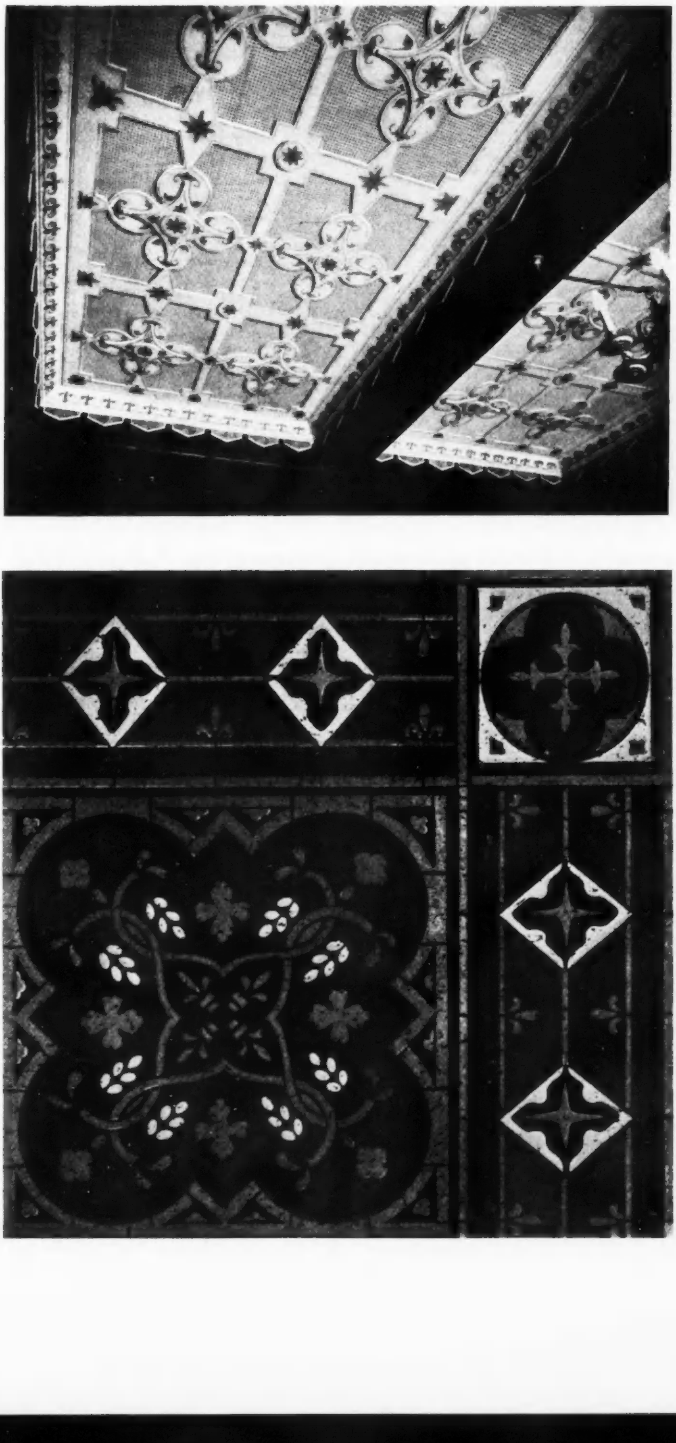
of four parts : a *Bibliography*, not only of books on the subject, but also of articles that have appeared in various journals ; a *Summary of Acoustical Defects* with the appropriate remedies to be used in existing buildings and the appropriate precautions in new buildings ; a very complete table, over forty pages long, giving *Coefficients of Sound Absorption* for various frequencies ; and nearly sixty pages of *Illustrated Particulars of Acoustical Materials*, in which photographs are given of acoustical and vibration-damping materials obtainable in Great Britain, with tabulated data as to sizes obtainable, weights, physical properties, etc., and the author's recommendations as to methods of fixing and surface treatment. He wisely gives, in these and other cases, the authority on which data concerning the acoustical properties of materials are based ; in most cases the National Physical Laboratory or other independant research body.

This is essentially a textbook, and Mr. Glover has hardly concerned himself with the architectural repercussions of the subject. Here is apparent the book's one defect, an impression that the author requires of acoustical materials that they shall not be allowed to interfere with the normal decorations of the building. Many of the materials he describes have, due to their acoustical qualities, a new and interesting texture which should be welcomed and not hidden, and acoustical necessity should be allowed partly to dictate the normal decorations.

Practical Acoustics for the Constructor is, however (this criticism apart), a valuable book, amply illustrated ; as serviceable as its title implies and even more exhaustive. J. M. R.


COMPRESSED STRAW
CEMENT
PLASTER
ROUGH GROUNDS
SKIRTING
EELGRASS QUILT
CEMENT
FLOOR BOARDING
EELGRASS QUILT
SUB-FLOOR BOARDING
METAL FLOOR CLIP
CEMENT BED
COMPRESSED STRAW
SOUNDPROOF PARTITION.
FLOOR BOARDING
EELGRASS QUILT
3"x2" BATTENS
CONCRETE FLOOR

A composite partition of high insulation.



These two illustrations are given by the author of PRACTICAL ACOUSTICS FOR THE CONSTRUCTOR *as suggestions for the decorative treatment of acoustical materials, but they suggest an unwillingness to accept the material frankly that makes an unhappy contrast with his logical attitude elsewhere in suggesting the use of acoustical materials for shuttering and similar purposes. The upper one is an absorbent ceiling decorated with applied fretted wallboard, and the lower one an acoustic cork panel with painted decoration.*

SLUM

[In our SLUM issue for June 22 we dealt with the housing and slum clearance problems in six cities : Liverpool, Leeds, Manchester, Birmingham, Sheffield, and Glasgow. This was followed by a similar analysis of the City of Stoke-on-Trent in the JOURNAL *for July 27. Below we print the eighth of the series.*
—ED., *A.J.*]

BRISTOL

[*By* PHILIP H. MASSEY]
B.Sc. (*Econ.*), *F.R.Econ.S.*

GENERAL POSITION

Area		19,674 acres	
Population	1921	377,018	
	1931	397,012	(25,000 unemployed)

Decennial increase 19,994
(1921 population of area added in intercensal decade 43)

1931	Persons per acre	20·2	
	Number of private families	104,360	
	Population in private families	378,865	
	Structurally separate dwellings occupied		83,584
		(vacant	1,343)
	Rooms occupied	468,929	
	Persons per room	0·81	
1921–31	Increase in occupied dwellings	11,114	
	Increase in number of private families	13,189	
	Families per occupied dwelling	1921	1·26
		1931	1·25
	Average size of private family	1921	3·97 persons
		1931	3·63 persons
	Average number of persons per room	1921	0·89
		1931	0·81
	Persons living more than 2 per room	1921	24,911 or 6·89%
		1931	20,050 or 5·29%
	(Families living more than 2 per room	1931	3,017 or 2·89%)
1931	Persons living over 3 per room	3,681	
	3 and over 2	16,369	
	Total over 2	20,050	
	2 and over 1½	38,905	
	Total over 1½	58,955	
	1½ and over 1	76,277	

67 families living 6 or more in 1 room
83 families living 8 or more in 2 rooms

The Wards

Number of wards in city	23
Number of Wards containing over all average of over 100 persons per acre	nil
Number of wards containing over all average of over 80 persons per acre	3
Number of wards containing over all average of over 1 person per room	3

Three Worst Wards on Persons Per Acre Standard

	Easton	St. Paul	St. Philip & Jacob (N.)
Acreage	252	160	246
Population 1921 ..	22,679	17,133	22,053
,, 1931 ..	20,610	15,492	20,026
Persons per acre ..	81·8	96·8	81·4
Private families ..	5,769	4,413	5,133
Population in private families ..	20,539	15,007	19,192
Structurally separate dwellings occupied ..	4,678	2,693	3,798
Rooms occupied ..	24,721	14,831	19,329
Persons per room	0·83	1·01	0·99

Three Worst Wards on Persons Per Room Standard

	Central East	St. Paul	St. Philip & Jacob (S.)
Acreage	109	(As	269
Population 1921 ..	3,779	above)	19,576
,, 1931 ..	2,876		17,014
Persons per acre ..	26·4		63·2
Private families ..	707		4,308
Population in private families ..	2,504		16,909
Structurally separate dwellings occupied ..	554		3,420
Rooms occupied ..	2,452		16,264
Persons per room ..	1·02		1·04

Construction of Houses, 1919-30

Total erected	12,908
by private enterprise	6,574
by Council	6,334
Demolished	just under 1,000

Clearance Schemes Completed or Undertaken Since 1919

Area	Houses	Families	Persons	Remarks.
1. Eugene Street	88	112	508	Rehousing practically completed
2. Bedminster Down	13	13	80	Rehousing completed
3. Sargent Street	39	60	290	Rehousing completed
4. Dings	137	152	727	Over 120 families rehoused
5. Hope Square, Bedford Place, Squires Court, Victoria Square, Air Balloon Court	94	102	464	Only four families still to be rehoused
6. Avon Street, Flooks Court, Wesley Place	63	82	417	Orders not yet confirmed
7. St. Augustine's, St. Paul	31	37	146	Inquiry not yet held
8. St. Jude's, Highland Court, Skulls Barton, St. Augustine's	52	54	224	Approved by Council, Jan. 10 1933

The first four schemes are under acts previous to the 1930 Act : the last four are all under the Greenwood Act.

Speed at Which Clearance is Proceeding

Average number of houses subject to Closing or Demolition Orders or within slum clearance schemes :—

1925–28	119 per annum.
1929–32	255 per annum.

Since 1919 over 1,400 houses have been demolished.

In the period 1925–32 arrangements were made for demolition of 1,500.

Further prospective Clearance Areas are being inspected, and an attempt is being made to hasten the process of clearance.

The Council has had great difficulty in accelerating its work, owing to the slowness in getting orders confirmed. Under the 1925 Act, when rehousing on the site was used, progress was still slower. The Eugene Street scheme is not quite completed, after nine years.

The areas which can be dealt with under the Clearance provisions of the 1930 Act are small and scattered, and generally unsuited to rehousing.

The total number of officially condemned houses is about 3,000.

Rents of Municipal Houses

A few at 8s. 6d., most 11s. 6d. to 18s. 5d.

Demand for better houses practically satisfied.

Demand for houses at 11s. 6d. or less still great, and including many overcrowded persons who would be unable to afford the better type.

The Council's Five-Year Programme Under the 1930 Act

Provided for erecting 2,000 houses in five years for accommodating families to be displaced from Clearance Areas or individual unfit houses.

1931–2	158 houses to be provided.
1932–3	425
1933–4	460
1934–5	460
1935–6	500
	2,003

The Council is almost keeping pace with this.

In 1931 orders were made in respect of 153 houses, in 1932 in respect of 412.

Rehousing amounted to 100% of programme in 1931–2, about 75% in 1932–3.

Special Difficulties

"As the areas which can be dealt with under the Housing Acts are not of sufficient extent to permit of redevelopment for housing purposes, the speed of slum clearance is determined to a large extent by the rate at which families can be induced to move to the suburbs. . . . It is considered that the easiest method of solving the slum problem would be to continue building small houses at moderately low rents to accommodate families willing to move to the suburbs, and to allow a 'grading up' system to operate by making demolition orders on the unfit houses and forcing the occupants to move into the houses vacated by families transferred to the outskirts."

Reaction of Tenants to New Environment

Report of Housing Committee (1930) :—
"For 75% of the families in the 6,334 Corporation houses the accommodation previous to removal did not exceed two rooms. Considering the conditions under which they had lived, with insufficient accommodation and lack of proper facilities for cooking, washing, drying and other domestic duties, without gardens to afford relaxation or to stimulate interest in pursuits other than ordinary daily toil, it is generally regarded as highly satisfactory that the response of tenants to improved conditions has been so marked. They take a real pride in their new homes and their gardens are well cultivated."

Sample Survey

A survey of five areas of the City is available.

Although only 447 houses were visited, they are stated to be typical, *not* specially selected. This would appear doubtful in view of the fact that several of them are now being cleared. If they are typical, then 10,000 similar houses, containing about 12,000 families and 60,000 people live in these conditions.

The following figures summarized the conditions of the five areas selected, taken together.

Houses examined	447.
Number of families	529.
Population	2,640 (1,575 adults, 1,065 children).
Average family	5.
Average number of persons per room	1·58
Overcrowding	
on so-called Registrar-General's Standard (children under 10 counted as halves)	21·5%
Manchester Standard	44·66%
Separation of Sexes Standard	15·38%
Average rent	6s. 2½d.
Employment of inhabitants	
Casual employment	40%
Unemployment	18·6%
Ability to move—	
Living within ½ mile of employment	43·2%
Within 1½ miles	86%
Wish to leave house	58·6%
Wish to leave area	43·6%
Have applied at some time for Corporation house	27·2%
Able to pay rent and travelling expenses of nearest Corporation House	
on basis of income of head of family	2%
on basis of family income	17·2%

(This has been calculated by finding the size of house necessary for each family and assuming 20% of income as available for rent.)

General Comments and Deductions

There are about 3,000 officially condemned houses in Bristol, containing, say, 17,500 people.

Besides these there are a large number of overcrowded and insanitary houses.

Houses which have "gone down" need reconditioning, including provision of extra lavatories and bathrooms, etc.

The others, built at great speed when social consciences did not exist, cannot, unfortunately, be demolished at once owing to the shortage.

The tenants of these houses are, on the whole, surprisingly clean, and do their best with their houses, but "it is not surprising to find tenants ceasing to wash the floor when the boards are rotting. Some of these people are being drawn into a vicious circle of dirt, degradation and despair."

Possibilities of Rehousing the Slum-dwellers

Average rent in the five areas was 6s. 2½d.

Family incomes are adequate for removal to nearest Corporation house in 17% of the families; 14% could afford 11s, 50% 8s.

Most of the incomes are insufficient to feed, clothe and shelter the respective families on the Rowntree Standard.

Expenditure

Some form of allowances, beyond the statutory subsidies (which cannot be obtained for the great majority of these people because their houses are not legal "slums") is essential if they are to be rehoused, either

1. (expensively) on the site, or
2. (relatively cheaply, but with fares to pay) on estates.

(The expenditure of the City on education and on roads and bridges is about 4 times that on housing.)

A few descriptions of particular houses

"In (another) damp, three-roomed house (rent 7s.) the two parents and two girls use one bedroom and three boys between 10 and 12 years of age sleep in a room 8 ft. 3 in. by 8 ft. 6 in., which also acts as a passage way into the other bedroom. One of these boys has had pneumonia seven times."

"Two adults and five children occupy two very small rooms at a rent of 5s. 7d. Three beds occupy all the ground space in one of these tiny rooms."

"A rent of 6s. 9d. is paid by a family of six for a four-roomed house with collapsing walls. The floors are in holes and appear very unsafe. Paper hangs from the walls because of the dampness. Rats and vermin come in from adjoining stables."

"A six-roomed house, with one w.c. for 19 persons is occupied by 8 adults and 11 children . . . "

CONCLUSION

3,681 people living over 3 per room (assume average 4) have about 900 rooms. They should have 2,450 and, therefore, need another 1,550.

16,369 people living 3 and over 2 per room (assume average 2½) have about 6,550 rooms. They should have nearly 11,000 and, therefore, need about 4,400.

38,905 people living 2 and over 1½ per room (assume average 1¾) have about 22,200 rooms. They should have nearly 26,000 and, therefore, need about 3,750.

Minimum needs to prevent overcrowding at more than 1½ per room, therefore appear to be 9,700 and maximum needs about 39,000 or slightly more.

Increasing these figures by 25 per cent.

in accordance with our general rule gives 12,000 and 49,000.

Taking the geometric mean gives about 25,000 rooms required, or say, 6,000 houses.

NOTE—

A much larger figure has been obtained by means of a different analysis. For this analysis the Garden Cities and Town Planning Association, on whose pamphlet "The Housing Needs of Bristol in Relation to the Greenwood Act" I have draw freely, is responsible.

The analysis is as follows (it refers to the position in 1931) :—

> In 1919 there were 5,000 houses required to overtake the shortage caused in the war. The population has increased by about 53,000, requiring, say, 10,600 houses. Overcrowding required about 15,600 houses in 1921, certainly more now. Number of houses built since the War 13,000 and number demolished 1,000. Net increase 12,000. 2,600 officially condemned. So Bristol wants 22,000 houses.

Now the decennial increase in population is only 20,000. It may be that a large increase in area has involved the extra 33,000. But that increase in area would not justify a figure based on the assumption that these 33,000 people added to the area did not possess any houses at all ! I should be pleased to be able to clear up the difficulty.

Application List Closed

On May 15 the Housing Committee decided that the register of applications for houses must be closed until the end of the year.

Last year there were 3,004 applications and only 590 houses vacant.

SUMMARY

The following figures represent the results arrived at prior to the consideration of Bristol :—

Population 4,984,335.
260,948 living over 3 per room.
1,265,320 living over 1½ per room.*
270,000 rooms required merely to abate overcrowding at over 1½ per room.*
294,500 houses required altogether.

The analysis of Bristol gives the following results :—

Population 397,012.
3,681 living over 3 per room.
58,955 living over 1½ per room.*
12,000 rooms required merely to abate overcrowding at over 1½ per room.*
6,000 houses required altogether.

Totals for Eight Cities

Population 5,381,347.
264,629 living over 3 per room.
1,324,275 living over 1½ per room.*
282,000 rooms required merely to abate overcrowding at over 1½ per room.*
300,500 houses required altogether.

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* Over 2 for Glasgow.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may in the course of time indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems. Crown Copyright Reserved.

External Stucco

¶ *EXTERNAL white cement-stucco on a house was reported to have cracked very badly over the whole area of the work ; in certain places, in fact, both finishing coat and undercoat had come away from the backing. The stucco, which had been applied to common brick backing, consisted of an undercoat of 1:3 cement and sand mortar and a finishing coat of 1 part cement and 2 parts washed china clay sand, to which a certain amount of mica had been added. A hard, highly polished surface had been imparted to the finishing coat by means of emery polishers.*

In the course of an inspection of the work, it was discovered that something like two months had elapsed between the completion of the undercoat and the application of the finishing coat, and that the undercoat had been applied in wet weather. It was of considerable interest to note that the stucco was in good condition on certain wing walls built in sand-lime bricks.

The Station has investigated a considerable number of failures very similar to this, and it has been concluded that the problem of the application of external cement renderings over brickwork is one of the utmost difficulty, owing to the very numerous variable factors involved. Investigations are in progress at the Station and have been proceeding for a considerable time, but it is not yet possible to offer a final and definite explanation of the mechanism of failures of this kind. It is known, of course, that all cement products shrink as they dry and, other things being equal, it appears that the shrinkage is in a large measure controlled by the richness and type of the mix and the amount of water remaining in it after application to the wall. In the case of a cement rendering the richness of the mix is mainly determined by considerations of convenience of application of the particular mix employed. The water content cannot be precisely defined since the condition of the rendering when the operative finishes work on it will depend to a large extent on the rate at which water is abstracted from the wet mix by the background of brickwork.

It will be seen, therefore, that there are reasons to suppose that the success of the work may in large part depend on the moisture condition of the brickwork when the rendering is applied, but even under the most satisfactory conditions a certain amount of shrinkage cracking must be regarded as inevitable. This, as is well known, takes two main forms :—

1 : A network of fine cracks extending very little below the surface, usually known as "crazing," and

2 : The development of major cracks extending right through the rendering ; it is, of course, these major cracks which are the more troublesome.

When the rendering is cracked right through to the brickwork, rain penetrates and the brickwork tends to become saturated. The rendering dries at the outer face and is kept wet at the back and, as a result of differential shrinkage, tends to assume a curved form. This tendency to curvature can only be restrained by adhesion to the brickwork backing, and in the event of any deficiency in adhesion, hollow areas will develop and successive rains may lead to progressive breakdown of adhesion, so that, in a bad case, large slabs of the rendering may ultimately fall from the wall.

It is often observed that there is a deposit of salts behind the rendering in the hollow areas, and the theory has been advanced that the failure is primarily due to their presence ; in fact, that the rendering has been pushed off by the crystallization of the salts. Although the work at the Station is not sufficiently advanced to warrant a full and definite statement on this point, it is doubted whether the presence of salts is the fundamental cause of the trouble, and there is reason to suppose that the formation of these deposits is a secondary effect contingent on the separation of the rendering from the brickwork by purely physical causes. Only in the case of the presence of large quantities of magnesium salts is it likely that a plaster or rendering will actually be displaced by force of crystallization. It is possible, however, that the progressive failure of adhesion, when once failure has commenced, is to some extent accelerated by the deposit of salts.

To revert to the particular case under review, there appears to be no reason to assume that there was any obvious defect in materials or workmanship which would account for the trouble. In fact, the finish is so excellent that it is evident that no pains were spared to make a sound job. It was mentioned that the work was carried out in a period of wet weather, and, for the reasons stated above, it is just possible that this may have been the most important factor which has given rise to this trouble. The surface texture of the particular type of common bricks used seems to be such that there may be difficulty in obtaining satisfactory adhesion of renderings and surface finishes generally, and, given unfavourable weather conditions, such as were experienced in this case, failure is liable to occur. The fact that these bricks were difficult to render is probably illustrated on this job by contrast with the excellent condition of the rendering on the sand-lime bricks in the wing walls.

So many factors are involved in a failure of this kind that it would be unwise to offer any generalization; each case should, in fact, be considered individually. It was suggested in the present instance that the method of repair to be adopted might be decided at a conference of the various parties concerned.

"Bleeding" of Creosote through Fibrous Wallboard

¶ *AN architect reported the "bleeding" of creosote through the fibrous board lining of the ceiling in a new church. The roof timbers had been treated with preservative under pressure as a precaution against attack by dry rot fungus. The fibrous wallboard lining had been chosen on account of its sound absorbent properties; it had been proposed to leave it uncovered and the creosote stains were a very serious disfigurement. The inquirer asked whether some form of paint treatment could be suggested which would prevent the "bleeding" of the creosote and at the same time form a suitable base for the application of distemper.*

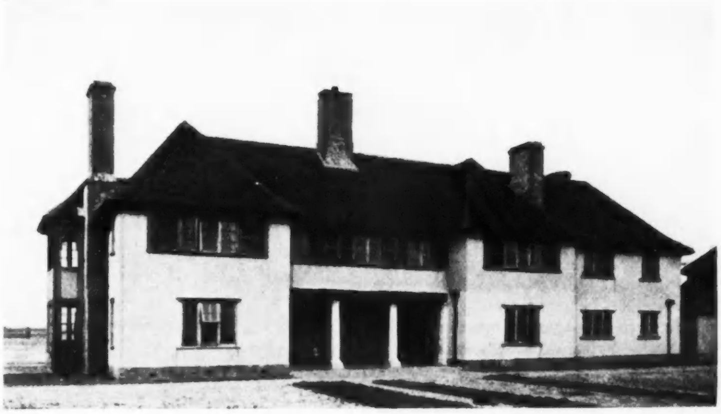
It is sometimes stated that two coats of aluminium paint, used as a primer, may be effective in stopping the bleeding of creosote. In the present case, however, the application of this, or any effective paint treatment, would result in such a serious reduction of the sound absorption coefficient of the wallboard that the virtue of the lining for acoustic purposes would be almost entirely lost. It was suggested, therefore, if the dark colour could be tolerated, that the whole surface of the board should be creosoted. This would not be expected to reduce the sound absorbent properties of the board very materially and would offer the advantage of protecting the board from fungus or mould growths.

Effects of Efflorescence from Old Bricks

¶ *OWING to a local shortage of bricks, a batch of old bricks had been used for the interior lining of a house. Some of those which came from a disused furnace were showing marked efflorescence. The builder forwarded samples of the efflorescence and asked: (1) whether the salts would be likely to cause damage to the plaster; (2) whether there was any method of treatment which would prevent efflorescence; (3) whether the trouble was only of a temporary nature; (4) whether there would be any harmful results to decoration if the efflorescence came through the plaster.*

The sample of the efflorescence was found to contain a considerable quantity of magnesium salts. The effects of the crystal-

HOUSE IN SUSSEX

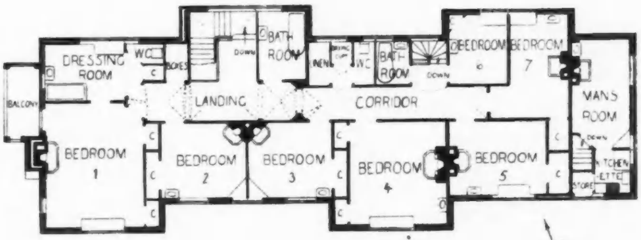


This house is built on a level site, separated from the foreshore only by a bank covered with tamarisk, and a ditch. Access to the house from the sea is through a gap cut in the bank opposite the loggia, and over an oak bridge constructed across the ditch. The plinth and chimney-stacks are faced with local stock bricks with rough flush joint, and the walls above the plinth are roughcast, distempered in cream. The roofs are covered with old tiles. The loggia columns are of Portland stone with an oak beam over.

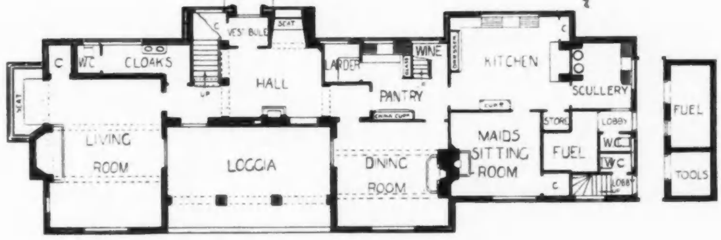
All the external joinery, including the woodwork of the eaves cornice, is of oak.

It was originally proposed to use steel window sashes and leaded lights throughout, but this was found impracticable owing to the action of the sea air, which quickly corrodes any unprotected ironwork. The window sashes were therefore made of oak with bronze fittings, and the French casements of bronze throughout.

The internal walls of the chief rooms have the plaster finished with a wood float to a rough granular surface and distempered. The first floor corridors are vaulted in plaster. The bedrooms have built-in dressing-tables and lavatory basins. The photograph shows the garden front, facing the sea.



FIRST FLOOR PLAN



GROUND FLOOR PLAN

DESIGNED BY C. BIRDWOOD WILLCOCKS

lization of salts of magnesium have been investigated at the Building Research Station, and it has been found that an efflorescence of this kind presents a rather special problem. There is a marked tendency for the salts to crystallize at the interface of the brickwork and plaster, and this may result in the plaster being forced away from the wall. Several cases have been reported where this has actually occurred.

It would be unwise to attempt to plaster direct on the brickwork, since, even if the plaster is not displaced, there is every likelihood that the salts will come to the face of the wall and so destroy the decoration. It will, therefore, be necessary to batten the wall and apply plaster on lathing, or wallboard, out of capillary contact with the brickwork containing the salts.

So far as we are aware, there is no manner in which the walls could be treated with a surface application to prevent trouble of this sort.

It may be said that the trouble is temporary, only in the sense that it may cease when all the salts now present in the bricks have been brought to the surface; for all practical purposes it can be assumed that the trouble may persist almost indefinitely.

If, however, the efflorescence is associated with individual bricks which can be located, it would obviously be desirable to cut out the worst of them.

Discolouration of Internal Decoration

¶ *A BUILDER submitted samples of wall plaster and a lining paper which had been painted with two coats of oil paint, one coat of a proprietary gloss paint and one coat of a proprietary varnish. Brown discolouration was showing in fairly large patches on the surface of the paint as well as black stains. The back of the lining paper was covered with pink patches. The samples had been taken from an externally rendered wall of a house, said to be about 200 years old. The discolouration had appeared particularly in one corner of a room at a height of about 6 ft. above floor level, but also at intervals along the external wall about 6 inches above the skirting. A few months before the internal decoration was carried out a waterproofing treatment had been applied to the outer face of the wall. Pin head black stains were said to have appeared shortly after the internal decoration was completed and after 12 months these have increased to large black stains, and brown patches.*

The builder was now being called upon to redecorate the room and wished to know the cause of the staining and how its recurrence could be prevented.

Analysis of the paint film shows the presence in quantity of lead, zinc, barium and sulphides, and this indicates the use of a coat of white lead paint and a coat of lithopone. The zinc sulphide of the lithopone is normally white but, if it is able to react with white lead, black lead sulphide is formed. The brown discolouration and the black stains are stages in this reaction.

The pink stains on the back of the paper have been identified as due to a fungus of the "Fusarium" type which is known to produce a pink colour when in contact with linseed oil, bread or potato. In this case the colour may be either from the oil in the paint or from starch in the paste. The spores of the fungus may be present in the air, but moisture and warmth are conditions necessary to encourage growth.

In this particular case, it may be assumed that moisture is, or has been, present in the walling and may or may not have been derived from external sources. As the outside of the wall was given a coat of waterproofing liquid shortly before applying the impermeable film of oil paint to the inside, the moisture contained in the plaster and paste would be trapped in the wall and this might be sufficient to allow the growth of the fungus. The appearance of the stain immediately above the skirting is perhaps suggestive, however, of a defective damp course and it would be interesting to know whether any signs of dry rot fungus are visible at the back of the skirting.

To summarize, the black stains may be said to be due to the use of lithopone and white lead in successive coats and the reaction between these two substances, which might possibly not have taken place under completely dry conditions, has been hastened by the growth of the pink fungus behind.

In making good the work it will first be necessary to ensure that no moisture is penetrating from without, either through the walling or by capillary rise from the ground should the damp course prove to be defective. After stripping the existing decorations, the exposed plaster should be sterilized, and two methods may be suggested for this: (1) A blow lamp flame may be played lightly over the whole surface, care being taken not to apply so much heat as would lead to disintegration of the plaster, or (2) the walls may be wiped over with methylated spirit, or both these methods may be applied. If methylated spirit is used, due attention must be paid to the provision of adequate ventilation while the work is being carried out, and also to danger of fire. If a new lining paper is applied it would be advantageous to use an antiseptic paste and the addition of a small amount of phenol would probably suffice for this purpose. Here again care is necessary in using the phenol.

Effect of Unsound Lime in Mortar

¶ *A SOMEWHAT unusual failure of a pebble dash finish to a small house was reported by a borough surveyor. A number of cracks had de-*

OUR SECRETARIES

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A. NICOL BRUCE

ROYAL INCORPORATION OF ARCHITECTS IN SCOTLAND

BORN in 1887, Mr. A. Nicol Bruce was educated at home and abroad, completing his office and university training at Edinburgh in 1912, when he qualified as a Writer to His Majesty's Signet. He served throughout the war.

In June, 1927, Mr. Bruce was appointed simultaneously Secretary of the then Incorporated Architects in Scotland, and Royal Italian Consul for Edinburgh and the East of Scotland. Two years later he became Secretary and Treasurer of the Edinburgh Architectural Association. Under his management the membership and funds of the latter body have increased by over 40 per cent. and 60 per cent. respectively, while the Incorporation, *inter alia*, attained the "Royal" dignity in 1929. Mr. Bruce is also a Knight of the Crown of Italy and president of the Scots Vernacular Association and of the Scoto-Italian Society.

veloped in the pebble dash, mostly in a horizontal direction. On inspection it was observed that the cracks were not confined to the roughcast, but extended through the 9-in. brick wall and internal plastering. The cracks were particularly noticeable at the window reveals. It was stated that the walls were built in a mortar composed of 1 part of lime to 3 parts local pit sand. On removing a part of the roughcast, the mortar in the joints was seen to be laminated in thin horizontal layers; moreover, it crumbled to powder under very slight pressure. It was stated that the lime had been brought from a distant source and was delivered to the job in 1-ton lots, and that it was considered ready for use after about 18 hours' slaking.

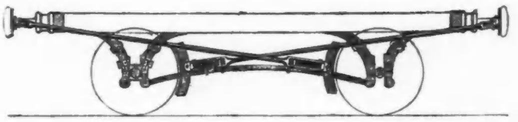
The lime used in these buildings is a magnesian lime and the technique of slaking a lime of this kind is quite different from that used with a calcium or greystone lime. From the information supplied, therefore, it seems that the trouble was probably caused by unsuitable slaking and premature use of the lime.

Magnesium carbonate decomposes at a lower temperature than calcium carbonate and, when a mixture of the two is burnt so as to calcine the calcium compound properly, a large amount of the magnesia must be overburnt; this overburnt portion will slake very slowly. To prevent trouble from this cause, it is necessary to take special precautions during slaking. For use in mortar, a heap of one or two tons of the quicklime should be formed and made wet but not flooded, and covered up with the sand in order to conserve the heat as much as possible, and then left for *at least three days*. During this period the high temperature created by the slaking of the calcium oxide will aid in slaking all but the most inert magnesium oxide which, at ordinary temperatures, will remain unslaked indefinitely.

At the end of three days the whole pile should be turned over and well mixed and passed through a coarse riddle. The presence of the sand prevents a finer sieve being used. This method is not suitable for lime required for plastering, both on account of the amount of sand used and because, although sound enough for mortar in that no serious expansion should occur, yet a certain amount of popping and pitting might take place.

Accordingly, for plaster work a magnesian lime should be slaked in the normal wet way. As it is desirable that the material should attain as high a temperature as possible, care should be taken not to drown the lime. After slaking, the putty should be matured in the pit for three months before use.

The above instructions are based on the normal practice in those districts where magnesian limes are common and are used successfully, and it seems that the trouble in this case is entirely attributable to the introduction of a material in a district where the special craft technique required for handling it was lacking.



TRADE NOTES

[*BY F. R. S. YORKE, A.R.I.B.A.*]

Aluminium Alloy

A PHOTOGRAPH of *Diana II*, the 55 ft. high speed cruiser, constructed entirely in aluminium alloy, provides a significant frontispiece to the Birmabright booklet, which has recently been issued in an enlarged form with several sections revised in the light of new experience and with fresh data added to complete the information they contain.

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Whilst, owing largely to the limitations of existing types, the employment of aluminium alloy is as yet only in its infancy, it is claimed that the very near future will find the material used widely for structural work.

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In every development of modern transport, by road, rail, sea or air, where the efficiency of propelling machinery approaches the limits of achievement, reduction in dead-weight carried can alone effect economy in the cost of motive force. Travelling speeds, especially by air, have increased so greatly that the stress upon structures calls for materials of high mechanical endurance.

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In the case of building, the modern architect is at all times seeking new decorative values in addition to lightness in the materials he employs.

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The alloy of the future must possess high physical strength to enable it to be used in many forms of constructional work, where lightness has become of vital importance.

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It must be available in all constructional forms, cast and wrought, and be amenable to all working and welding operations, and above all qualities it must possess that of permanency, not only in resistance to fatigue but to the corrosive action of the atmosphere, of hard water, sea water and of many chemical substances.

In Birmabright alloy these qualities are, it appears, to be found. It is claimed that the metal resists corrosive action in severe conditions, and that it does not suffer any crystalline corrosion. Its valuable physical properties are achieved directly in the production of the different forms, without resort to artificial means of heat treatment and ageing. It has qualities of fatigue resistance which in combination with its high resistance to corrosion assure permanence in its several applications.

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The alloy can be produced in the form of sand, die and pressure-die castings; rolled sheets; extruded angles, rods and sections; drawn sections; extruded and drawn tubes; drawn wire; nuts, bolts and rivets; wood and metal thread screws; forgings and hot stampings, and so on.

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Following the general introduction, the booklet deals with physical characteristics; specific gravity, co-efficient of linear expansion, compressive strength, fatigue resistance, proof stress, Young's modulus of elasticity; strength at temperatures and electrical resistance. A table of general physical properties is given.

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Under general manufacturing properties it deals with casting qualities, production of wrought forms, working properties, machining properties, welding, soldering, brazing and polishing.

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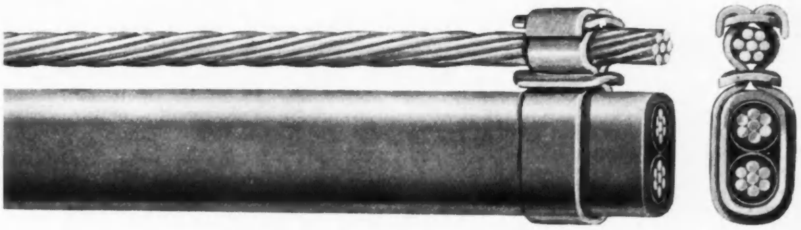
Later there are notes on resistance to corrosive action, anodic oxidation, cleaning and preservation of surfaces, application of paints, lacquers, etc., and Air Ministry Specifications.

Electric Service

A mural service and distribution system, produced to enable electricity to be installed easily and economically in villages and housing schemes, where only a low revenue is earned from small consumers, is described



Electric service: method of suspending the lead covered service cable from a steel suspension strand by means of catenary clips.

and illustrated in detail in a brochure recently issued by Henley's Telegraph Works.

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The system is designed to provide as neat and inconspicuous a service as is possible where cables run overhead and along external walls.

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Alternative systems are available, namely :

1 : An earthed metal protected system having a covering of durable and semi-flexible metal, impervious to moisture.

2 : An unearthed system, protected by braiding impregnated with a special preservative and weather-resisting compound of a type used successfully for many years, in outdoor cable work.

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The joint, tee, feed and fuse boxes are designed to meet the special conditions of mural work. They are made from metal which is, manufacturers say, preferable to more fragile materials that may be damaged by house repairers, decorators and window cleaners, and even by stones thrown by mischievous youths. Loose and unnecessarily small parts are eliminated and in no case is it necessary for the wireman to remove any screw entirely. The boxes are sealed against the ingress of moisture by a cold plastic compound made especially for this purpose. The boxes are suitable for either metal-sheathed or non-metal-sheathed cables.

Welding in Repair Work

Many of the component parts of refrigerating plant, pumps, electrical apparatus and hot water systems, cast iron and wrought iron boilers, tanks, and pipes, can be satisfactorily repaired by modern welding processes, and I am told that Messrs. Barimar have recently introduced a low-temperature welding process by means of which welded repairs may be made at a considerably lower temperature than it has been necessary, formerly, to employ.

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This process should simplify the repair of malleable and cast iron parts, by eliminating some of the elaborate precautions which have previously been taken to counteract distortion, and should diminish, or even obviate machining after the welding operation is complete.

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Particulars concerning the precise nature of the new process have not been made public, but I understand that its success is due to the invention of a new welding rod, and to the discovery of a technique which so reduces the time factor that intense heating is avoided.

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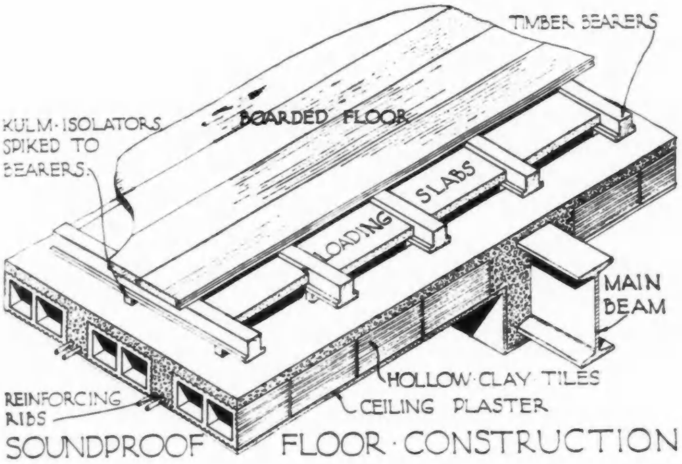
Messrs. Barimar call my attention to the fact that this new low-temperature process is not the only advance in welded repair work witnessed in recent years. Stainless steel, for example, can now be welded, for manufacturing and repair purposes, with rods having an analysis identical to that of the parent metal. The process, which was developed in the repair of machinery and containers used in the chemical manufacturing industry, has now been extended to the welding of all types of decorative metal work, particularly that of modern lighting systems.



An efficient form of sound-proof floor construction in which the inertia of the "floating" boarding floor is increased by the use of concrete loading slabs. Insulation of tapping noises on the floor is greatly increased.—From PRACTICAL ACOUSTICS FOR THE CONSTRUCTOR, *reviewed on pages 240-241.*

At one time a considerable degree of risk attended most welding operations in repair work, but so completely has this risk been eliminated, that the most intricate repairs are now executed under guarantee.

OBITUARY

JOHN THOMSON

We regret to record the death of Mr. John Thomson, F.R.I.B.A., of Glasgow.

A son of the late Mr. Alexander ("Greek") Thomson, the well-known Scottish architect, who designed many churches and commercial and administrative buildings in Glasgow, Mr. Thomson was born in the Shawlands district of the city 74 years ago. He received his early education at Langside Academy and the old High School in John Street, and later he studied at the Kensington School of Architecture, London. After serving for five years with London architects, he commenced practice in Glasgow in 1899. In 1914 he was joined by Mr. R. Sandilands, the firm being then known as Thomson and Sandilands. When Mr. Sandilands died, Mr. Thomson was joined by Mr. Alex. H. MacLeod, the sole surviving partner. Mr. Thomson was a silver medallist of the R.I.B.A., and a member of the Glasgow Institute of Architects. He was elected a Fellow of the R.I.B.A. in 1906.

SIDNEY FRENCH

We regret to record the death, which took place on August 14, of Mr. Sidney French, F.R.I.B.A., a Cambridge architect and alderman of the Cambridge Town Council.

Mr. French was born at 9, St. Andrew's Hill, Cambridge, where his father, the late Mr. Henry French, solicitor and Clerk of the Peace, practised. After qualifying as an architect with Mr. Frank Waters, of Cambridge, he started in practice on his own account.

In 1917 Mr. French followed in his father's footsteps by becoming a Town Council representative of St. Andrew's Ward in the Conservative interest. He held his seat unopposed until 1930, when his services to the town received due recognition by his elevation to the Aldermanic bench. He was also a director of the Cambridge Permanent Benefit Building Society.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Hospital at Bexhill (pages 232–233). General contractors, G. H. Denne and Son, Ltd. Sub-contractors, Berkeley Electrical Engineering Co., Ltd., electric lighting ; J. Jeffreys & Co., Ltd., hot water heating and supply ; Korkoid and Ruboleum Co., Ruboleum tiling ; Waygood-Otis, Ltd., lift.

Rehousing at Liverpool : The Speke Road Tenements (pages 236–238). Sub-contractors : Ravenhead Brick Co., facing bricks ; Liverpool Artificial Stone Co., artificial stone dressings ; Colthurst Symons, Reynardo tiles. The buildings are of fireproof construction throughout, the floors, reinforced beams and columns being constructed on the Trussed Concrete Steel Company's system.

House in Sussex (page 245). General contractors, Walden and Son. Sub-contractors : Shanks & Co., sanitary goods ; Elliott's, entrance porch ; Bratt Colbran & Co.. Ltd., and The Heaped Fire Co., fire-places ; Bell's Poilite and Everite Co., Ltd., rubber floor tiling ; British Doloment Co., Ltd., composition floor ; Henry Hope and Sons, Ltd. bronze French windows ; United Water Softeners, Ltd., water softening plant.

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We regret that the name of Messrs. Barker, Young & Co., Ltd., was omitted from the list of sub-contractors for Hindlewell Council School, Scarborough, illustrated in our last issue. The firm prepared the design of the electric heating installation and also supplied the whole of the electric heating apparatus, together with thermostatic control gear.

The heating apparatus included Unity tubular electric heaters and both high and low temperature Unit panel radiators, the total electric loading involved in the space heating being approximately 200 kW.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

Plans passed by the DARTFORD U.D.C. : Additions, 99, Spring Vale, for Mr. W. G. Cooper ; football stand, off Princes Road, for London Paper Mills Co., Ltd. ; four houses, Knowle Road, for Messrs. H. C. Wright & Co., Ltd. ; 15 houses, Gordon Road, for Mr. W. G. Cooper ; Plans submitted : 153 houses, Priory Park estate, for Mr. W. J. Brise ; two shops, Overy Liberty, for Messrs W. J. Draper and Son.

The following plans have been submitted to the SOUTHGATE U.D.C. : Lay-out of 24 houses, Bush Hill, for Mr. G. W. Newman ; lay-out of shops, High Street, for Messrs. Ernest Owers, Ltd. ; lay-out of 152 houses, Stone Hall estate, for Mr. E. J. Westoby ; lay-out of 175 houses, Chase Field Farm estate, for Messrs. George Wimpey & Co., Ltd. ; additions to shop, rear 149, Bowes Road, for Mr. F. Malcolm Burr ; sub-station, Broadfields Avenue, for North Metropolitan Electric Power Supply Co. ; rebuilding, "Rising Sun" public-house, Chase Side, for Mr. W. Stewart.

SOUTHERN COUNTIES

The KENT C.C. is to extend the Medway Hospital at a cost of £38,500.

The West Sussex C.C. is to extend the MIDHURST Institution, at a cost of £15,000.

The West Sussex C.C. has prepared a scheme for the erection of a new reinforced-concrete bridge to the west of the existing narrow structure over the Arun at PULBOROUGH, at a cost of £13,000.

The WEST SUSSEX C.C. has decided that the work of erection of the new county offices be carried out by two separate contracts :—(a) Contract No. 1—foundation, framework of superstructure fireproof floors, staircases and basements (the estimated cost of the work to be carried out under Contract No. 1 will not exceed £20,000) ; (b) Contract No. 2—work necessary for the completion of the building.

EASTERN COUNTIES

The COLCHESTER Corporation is to erect a further 46 houses on the Ipswich Road site.

Plans passed by the YARMOUTH Corporation : Two houses, Collingwood Road, for Mr. G. W. Woods ; shop and house, Beresford Road, for Messrs. J. Balls and Sons ; three houses, Avondale Road, Gorleston, for Mr. F. Lambert ; two houses, Sturdee Avenue, for Messrs. H. R. Middleton & Co., Ltd. ; two houses, Middleton Road, Gorleston, for Messrs. H. R. Middleton & Co., Ltd. ; alterations and additions, the Norfolk Hotel, Marine parade, for Messrs. E. Lacon & Co., Ltd. ; alterations, 3, Northgate Street, for Messrs, Cox and Son ; addition to dressing-rooms, Regal Theatre, Regent Road, for the Regal Theatre Ltd. ; five houses, Lowestoft Road, Gorleston, for Mr. W. J. Sayers.

MIDLAND COUNTIES

Plans passed by the NORTHAMPTON Corporation : Eight houses, Manor Road, for Mr. John Dunkley ; two houses, Greenfield Avenue, for Messrs. H. Martin, Ltd. ; two houses, Park Avenue, for Messrs. S. G. Sale & Co. ; 13 houses, Pinewood Road, for Mr. H. W. Rainbow ; seven houses, Highlands Avenue, for Messrs. Chowns, Ltd. ; petrol depot, Old Towcester Road, for Blair Petroleum Co. ; sub-station, Kettering Road, for Electric Light Co., Ltd. ; two houses, Ridgeway, for Messrs. E. Green and Son ; shop and house, Balmoral Road, for Messrs. H. Holloway and Sons ; six houses, Welford Road, for Midland Dwellings, Ltd. ; 14 houses, Headlands estate, for Mr. J. E. Lucas ; alterations, Castle Tannery, Green Street, for Duro Tanning Co., Ltd. ; extensions, leather factory, Dunster Street, for Messrs. Jas. Collier & Co., Ltd. ; alterations, St. Michael's Hall, Turner Street, for Parochial Church Council.

Plans passed at SUTTON COLDFIELD : Three shops, Birmingham Road, for Mrs. Fletcher ; house and bakehouse, Chester Road, for Mr. H. V. Knight ; 10 houses, Maxstoke and Haselor Roads, for Mr. Geo. Stubbings ; two houses, Slade Road, for Mr. Grundy ; two houses, Tamworth Road, for Alton Estates, Ltd. ; two houses, Whitehouse Common Road, for Messrs. Davis, Ltd. ; house and shop, Whitehouse Common Road, for Mr. Bates ; two houses, Somerville Road, for Messrs. Davis and Son.

Plans passed by the TYNEMOUTH Corporation : Extension to premises, Reed Street, North Shields, for Messrs. T. Coulsdon and Sons ; additions and alterations, "Spread Eagle Hotel," Front Street, Preston, for Mr. F. T. Blumberg, on behalf of Newcastle Breweries, Ltd. ; two houses, Balkwell Lane, for Mr. W. Stockdale ; conversion to flats, 30 Hotspur Street, for Mr. T. W. Grey ; shop, Verne Road, for Mr. H. P. Woodall ; 2 houses, Preston Colliery Estate, for Messrs. Cackett, Burns, Dick and Mackellar ; alteration of offices to flats, Albert Edward Dock, for Messrs. Marshall and Tweedy, on behalf of Tyne Improvement Commission ; four houses and shops, and eight houses into flats, Wallsend Road, for Mr. W. Stockdale ; two houses, Balkwell Lane, for Mr. J. S. Hurrell ; shop, Heaton Terrace, for Mr. J. Burn.

The WARWICKSHIRE C.C. is to provide a Nurses' home at Warwick mental hospital, at a cost of £21,114.

NORTHERN COUNTIES

The Cheshire C.C. is to reconstruct ALTRINCHAM canal bridge, at an estimated cost of £24,000.

The Durham County Council is to proceed with the erection of a surgical unit at the BISHOP AUCKLAND institution, and a medical unit at the CHESTER-LE-STREET institution, at a cost of £19.950.

The following plans have been submitted to the BLACKPOOL Corporation : 17 houses, Delphene and Oakland Avenues, for Mr. W. Spencer ; two houses, Marton Drive, for Mr. H. Eckersley ; two houses, Collins Avenue, for Blackpool Corporation ; six houses, North Avenue, for Mr. H. Grimbledeston ; two bungalows, Warley Road, for Wardley Estates, Ltd. ; two houses, Devonshire Road, for Mr. G. F. Boyce ; four houses, Highgate, for Mr. H. Welch ; alterations and additions, Commercial Street, for Mr. R. Cook ; offices, Lyddesdale Avenue, for Messrs. R. and H. Fletcher, Ltd.

Plans passed by the BLACKPOOL Corporation : Two houses, Warley Road, for Wardley Estates, Ltd. ; six houses, North Avenue, for Mr. H. Grimbledeston ; two houses, Devonshire Road, for Mr. G. F. Boyce ; 10 houses, Promenade, for Sir L. Parkinson & Co., Ltd. ; two houses, Conway Avenue, for Mr. A. A. Holt ; four houses, Squires Gate Lane, for Messrs. Armstrong and Heward ; 10 houses, Rathlyn Avenue, for Mr. H. Grimbledeston ; eight houses, Knaresboro Avenue, for Hall Estates, Ltd. ; six houses, Hawes Side Lane, for Messrs. Houseman Bros. ; eight houses, Queens Drive, for Mr. W. Wrigley ; four houses, Whittam, Avenue, for Mr. W. Cardwell ; four houses, Anchorsholme Lane, for Mr. A. A. Holt ; four houses, Alderley and Albany Avenues, for Mr. T. Foster ; four houses, Harcourt Road, for Mr. H. Suthers ; six houses, Harrington Avenue, for Mr. A. Turner ; four houses, Sunny Bank Avenue, for Messrs. Chadwick Bros. ; two houses, Garton Avenue, for Mrs Johnson ; 14 houses, Dewhurst Avenue, for Starbrick Housing, Ltd. ; two houses, Whitegate Drive, for Messrs. G. Taylor, Ltd. ; two houses, Devonshire Road, for Mr. J. R. Fielding ; eight houses, Buckley Crescent, for Messrs Kennard and Mills ; two houses and shops, Red Bank Road, for Mr. C. E. Boden ; seven houses, Montpelier Avenue, for Messrs. R. Fielding and Son ; four houses, Sandicroft Road, for Mr. J. R. Fielding ; additions, Devonshire Road, for Blackpool Co-operative Society ; additions, Temple Street, Victoria Street, for Gazette and Herald, Ltd. ; additions, St. Walburga's Road, for the Convent of Holy Child ; additions, Queen's Drive, for Dr. G. Tuenon.

The BLACKPOOL Corporation has passed the following development plans : St. Walburga's Road estate, for Messrs. Thickett and Law ; land in Anchorsholme Lane, for Messrs. R. and H. Fletcher, Ltd. ; shops off Highfield Road, for Sir Lindsay Parkinson & Co., Ltd. ; Normoss estate, Hardhorn, for Hall Estate Co., Ltd. ; Elevare estate, Little Marton, for Mr. H. Radcliffe ; Stanley Road, Little Marton, for Blackpool Plumbing Co., Ltd. ; shopping zone, Marton Building Estates, for Mr. H. Best.

Plans passed at the CHESTER Corporation : Alterations, Old Vaults, Bridge Street, for Messrs. Greenall Whitley & Co., Ltd. ; six houses, St. Mark's Road, Saltney, for Mr. George Orme ; alterations to shop, Leadworks Lane, for Messrs. Williams and Mansley ; alterations, 5 and 7, White Horse Yard, Foregate Street, for Messrs. S. G. Mason, Ltd. ; additions to shop, 11, Chester Street, Saltney, for Mr. E. Thomas.

The LEEDS Corporation has arranged to deal with clearance areas at the rate of 3,000 houses a year.

Plans passed by the MORECAMBE Corporation : Street, Nicholson Avenue, off Lonsdale Avenue, for Messrs. Harrison and Moore ; house and shop (amended plan), Heysham Road, for Mr. F. Wyton ; two houses, Longlands Crescent, for Mr. R. Brown ; two houses, Walton Avenue, for Mr. F. Waterhouse ; two houses, Scowcroft Drive, for Mr. H. Allen ; six houses, Homfray Avenue, for Mr. F. Kellay ; new street, Barrowdale Grove, for Messrs. Barlow and Brown ; five houses, Westminster Road, for Mr. W. Pickard ; two houses, Twemlow Parade, for Mr. A. Barker ; four houses, Brantwood Avenue, for Mr. J. F. Shuttleworth ; additions, St. Christoper's Church, Bare, for Messrs. Austin and Paley ; 40 houses, Osborne Road, and Brook Road, for Messrs. Brook and Kershaw ; 25 houses, Barrowdale Grove, and Scawfell Avenue, for Messrs. Barlow and Brown.

The OTLEY U.D.C. is to erect 24 houses for the aged at Whiteley Croft.

The ROTHERHAM Corporation is seeking sanction to borrow £88,397, for the erection of 270 houses on the Eastwood estate.

The SCARBOROUGH Corporation is to proceed with the erection of 50 non-parlour houses on the Northstead estate, and two non-parlour houses in Cook's Row.

Plans passed by the SEDGLEY U.D.C. : Four houses, Turls Hill, for Mr. S. Wheeler ; four houses, Robert Street, for Messrs. A. and B. Oakley ; two houses, Turls Hill Road, for Mr. D. Perry.

The STOCKTON-ON-TEES Corporation has now prepared a revised scheme for new municipal buildings, at a cost of £42,000.

Plans passed by the WAKEFIELD Corporation : 18 houses, Dewsbury Road, for Mr. J. Percy Firth ; two houses, Manygates Lane, for Messrs. Dobson and Gighall ; houses in Wentworth Street, for Mr. W. Hudson ; two houses, Leeds Road, for Messrs. Kay and Lunan ; three houses, Wentworth Street, for Mr. W. Huson.

ISLE OF MAN

At a meeting of the DOUGLAS Corporation, £4.750 was voted for the purpose of defraying the third annual contribution of the Corporation in respect of the widening of the Loch promenade, and also £20,800 to enable the I. o. M. harbour commissioners, and the Corporation, to complete a certain portion of the scheme for widening the base of the Victoria Pier.

The DOUGLAS (I. o. M.) Corporation has approved plans of the proposed 150 additional houses at Pulrose.

SCOTLAND

The GLASGOW Education Committee is to repair schools, at a cost of £20,000.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	*s. d.*
A_1	**Aberdare**	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	**Banbury**	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5	1 0¾
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton	N.W. Counties	1 5	1 0¾
A_2	**Cambridge**	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A	Cumberland	N.W. Counties	1 4	1 0
A	**Darlington**	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	**Eastbourne**	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	**Felixstowe**	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	**Gateshead**	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	**Halifax**	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	**Ilkley**	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	**Jarrow**	N.E. Coast	1 5½	1 1¼
A	**Keighley**	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	**Lancaster**	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	**Macclesfield**	N.W. Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	**Nantwich**	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	**Oakham**	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	**Paisley**	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	**Queensferry**	N.W. Counties	1 5½	1 1¼
A_2	**Reading**	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	**St. Albans**	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	**Tamworth**	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1 1¼
A	Tyne District	N. E. Coast	1 5½	1 1¼
A	**Wakefield**	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	**Yarmouth**	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	,,		7	6
Building Sand	,,		7	9
Washed Sand	,,		8	9
2" Broken Brick	,,		8	3
¾" ,, ,,	,,		11	0
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	9	2	6
,, Wirecuts	,,	8	2	6
,, Brindles	,,	7	6	6
,, Bullnose	,,	9	14	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	8	8	0
Luton Facings	,,	8	0	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		19	0
,, ⅞"	,,	1	1	6
,, 1"	,,	1	3	6
,, 1¼"	,,	1	7	6
,, 1½"	,,	1	12	0
Deal matchings ½"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1½"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1¼"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ⅜"	,,	8	6
,, ,, ½"	,,	8	3
,, ,, ⅝"	,,	8	0
,, ,, ¾"	,,	7	6
,, ,, ⅞"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	,,	5	0	8	6
Boots	,,	3	3	4	5
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	2	0
,, drawn pipes	,,		19	0
,, soil pipe	,,	1	6	0
,, scrap	,,		14	6
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			10½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2½
,, ,, 26 oz. ,, ,, ,,	,,					3½
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
¼" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	1
Boiled oil	,,		2	3
Turpentine	,,		4	9
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
„ to reduce levels n/e 5' 0" deep and cart away	Y.C.		8	6
„ to form basement n/e 5' 0" deep and cart away	„		9	0
„ „ 10' 0" deep and cart away	„		9	6
„ „ 15' 0" deep and cart away	„		10	0
If in stiff clay	add „		2	6
If in underpinning	„ „		4	0
Digging, return, fill and ram	„ „		4	0
Planking and strutting to sides of excavation	F.S.		1	0
„ „ to pier holes	„			5
„ „ to trenches	„			5
„ „ extra, only if left in	„			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	„	1	6	0
„ „ „ (4-2-1)	„	1	12	6
„ „ „ underpinning	„	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and grating	„	16	6	18	0
Cast iron drains and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
„ „ in cement	„	29	15	0
„ Stocks in cement	„	35	15	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			5½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
½" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	„	6	9
¾" paving or flat	„	4	0
1" paving or flat	„	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	„	3	7	0
Do., 24" × 12"	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles	„	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	„	4	6	6
„ „ „ „ „ „ (green)	„	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" „ „ „ „	„	1	17	6
1¼" „ „ „ „	„	2	3	0
¾" × 2" fir battening for Countess slating	„		9	6
Do. for 4" gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1½" „ „ „ „ „	„		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	„	2	12	6
1½" do.	„	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1½" do.			1	11

CARPENTER AND JOINER—*continued*

		s	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" „ „	„	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	3	9
2" „ „ „	„	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" „ „ „	„	2	8
1½" „ but moulded both sides	„	2	4
2" „ „ „	„	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" „ „	„	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½" deal moulded wall strings	„	2	1
1½" „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" „ „	„	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	16	6
Do. in flashings		1	19	0
Do. in covering to turrets, etc.	„	2	6	0
Do. in soakers	„	1	12	0
Labour to welted edge	F.R.			3½
Open copper nailing	„			3½
Close „ „	„			4½

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	„	6½	8	9	11	1 3	—
Boiler screws and unions	„	3 3	3 9	5 0	8 0	—	—
Lead traps	„	—	—	—	6 3	8 9	—
Screw down bib valves	„	6 9	9 6	11 0	—	—	—
Do. stop cocks	„	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

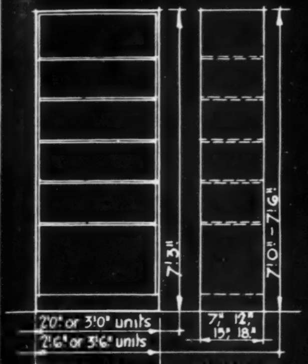
		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	9
Do. vertical	„		2	3
Rough render on walls	„		1	4
Render, float and set in lime and hair	„		2	0
Render and set in Sirapite	„		2	2
Render, backing in cement and sand, and set in Keene's cement	„		3	1
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1" girth	„			1½
1" granolithic pavings	Y.S.		3	6
1½" „	„		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	„		17	6
9" × 3" „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . from	„	2	9


7'3"
7'0" - 7'6"
2'0" or 3'0" units
2'6" or 3'6" units
7", 12", 15", 18"

STEEL SHELVING FOR BOOKS
(with adjustable shelving).

COMMON SIZES OF:

Books,

Novels, commonly Crown Octavo, 7½" × 5"
or Demy Octavo, 8¾" × 5⅝"
Illustrated Architectural books commonly Crown Quarto, 10" × 7½"
or Demy Quarto 11¼" × 8¾"
Folios of Architectural plates commonly 19" × 13", 13" × 10"
Technical & reference books commonly 9½" × 6½"

Periodicals:

"Vogue"	12½" × 10"
"Architectural Review"	14" × 11"
"The Architects' Journal	12½" × 9"

Newspapers:

"The Times", (London)	24½" × 18½"
Evening papers,	18½" × 13"

SIZE OF PAPER USED FOR BOOKS

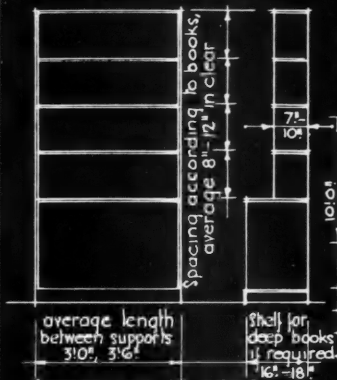
Pott	15" × 12½"	Demy	22½" × 17½"
Foolscap	17" × 13½"	Medium	23" × 18"
Post	19½" × 15½"	Royal	25" × 20"
Crown	20" × 15"	Super Royal	27½" × 20½"
Copy	20" × 16½"	Elephant	28" × 23"
Large Post	21" × 16½"	Imperial	30" × 22"

These sizes are subdivided according to the number of times the sheet is folded; one fold gives "Folio", two folds give "Quarto", and so on giving the following subdivisions: Folio, Quarto, Sixmo, Octavo, 12mo., 16mo, 24mo, 32mo.

SIZES OF STATIONERY PAPERS.

Pott	15" × 12½"	Large Post	21" × 16½"
Foolscap	16½" × 13¼"	Medium	22" × 17½"
Pinched Post	18½" × 14¾"	Royal	24" × 19"
Post	19" × 15¼"	Super Royal	27" × 19¼"
Demy	20" × 15½"	Elephant	28" × 23"
Sheet & half F'cap	24½" × 13¼"	Imperial	30" × 22"
Copy	20" × 16½"	Atlas	34" × 26"

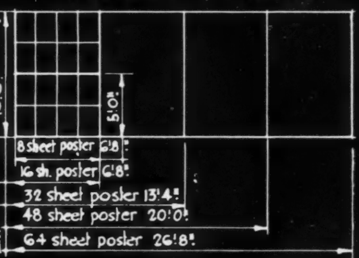
These sizes are subdivided into Folio, Long Folio, 4to, Long 4to, 6mo, Long 6mo, 8mo, & Long 8mo.

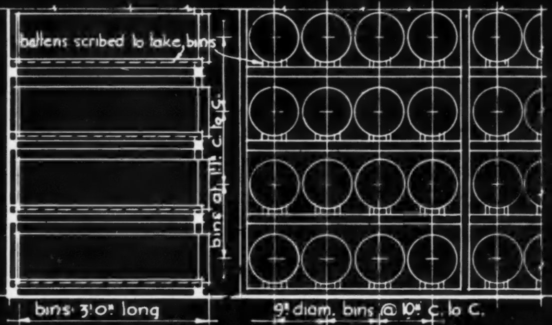

Spacing according to books, average 8"-12" in clear
7"-10"
average length between supports 3'0", 3'6"
Shelf for deep books if required
16"-18"

BOOKSHELVES IN WOOD.

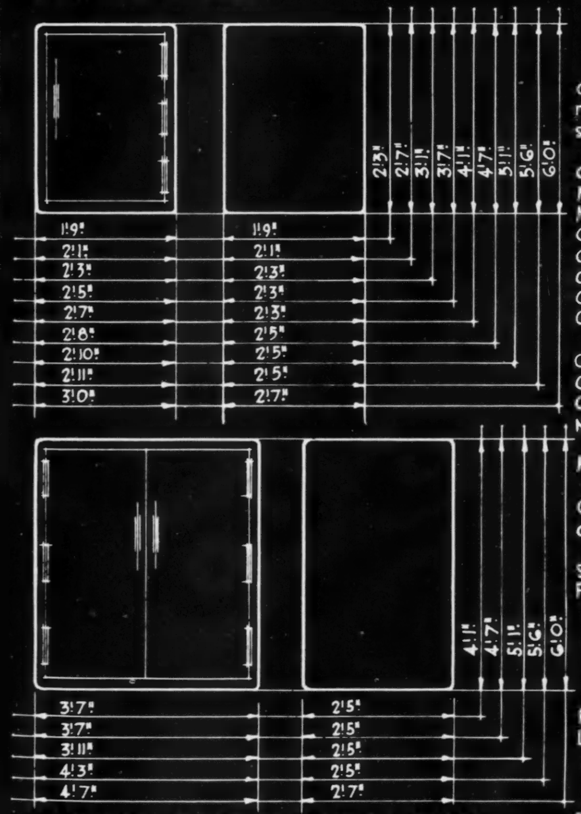
STANDARD SIZES OF POSTERS.

All posters are built up with Double Crown sheets (30" × 20"). usual multiples are of 8, 16, 32, 48, or 64 sheets. Larger than 64 sheets are not produced.


10'0"
5'0"
8 sheet poster 6'8"
16 sh. poster 6'8"
32 sheet poster 13'4"
48 sheet poster 20'0"
64 sheet poster 26'8"


battens scribed to take bins
bins at 1'1" c. to c.
bins 3'0" long
9" diam. bins @ 10" c. to c.

BIN RACKS & BINS FOR FILING DRAWINGS.


1'9"
2'1"
2'3"
2'5"
2'7"
2'8"
2'10"
2'11"
3'0"
1'9"
2'1"
2'3"
2'3"
2'3"
2'5"
2'5"
2'5"
2'7"
2'3"
2'7"
3'1"
3'7"
4'1"
4'7"
5'1"
5'6"
6'0"
3'7"
3'7"
3'11"
4'3"
4'7"
2'5"
2'5"
2'5"
2'5"
2'7"
4'1"
4'7"
5'1"
5'6"
6'0"

COMMON SIZES OF OFFICE SAFES.
Sizes from thief resisting safes by Messrs. John Tann Ltd.

CATALOGUES: The American Institute of Architects recommends that all catalogues should be of standard size, the standard being 11" × 8½".

ORDNANCE SURVEY MAPS:

Maps produced by the Ordnance Survey:

Map.	Scale.			Size of sheet
Gt. Britain & Ireland,	1:1000,000	or	15·782 miles to 1 inch.	24½" × 34¾"
Gt. Britain			10 miles to 1 inch.	
Gt. Britain			4 miles to 1 inch.	27" × 18"
Gt. Britain			2 miles to 1 inch	27" × 18"
Gt. Britain (is the Standard Map of the Ordnance Survey).			1 mile to 1 inch	27" × 18"
Gt. Britain (with contours)	1:10,560	or	6 inches to 1 mile.	36" × 24" 18" × 12"
Gt. Britain (no contours)	1:2500	or	25·344 ins. to 1 mile.	38" × 25⅓"
Cities & towns	1:1250	or	50·688 ins. to 1 mile.	

N.B. Numerous plans of towns to this scale are obtainable from stock or of any area to order.

Maps of London & environs, scale 1:1056, are also obtainable as revised for Land Registry purposes.

Complete town maps, scale 1:10,560 are obtainable of London & about 20 other cities & towns.

SIZES OF PHOTOGRAPHIC MATERIALS.

Plates:		Stock sizes for enlargements:	
¼ plate	4¼" × 3¼"	6½" × 4¾"	15" × 12"
½ plate	6½" × 4¾"	8½" × 6½"	18" × 15"
whole plate	8½" × 6½"	10" × 8"	20" × 16"
X-ray negatives	15" × 12" & 17" × 14" & rarely special sizes larger	12" × 10"	24" × 18"

POSTAL SERVICE: LIMITS OF SIZE AND WEIGHT.

Letters:

Inland, 2'0" × 1'0" × 1'0", or in the form of a roll 30" × 4"; no weight limit.
Imperial, 2'0" × 1'6" × 1'6"; " " " " " " " 30" × 4"; max. 4 lbs.
Foreign, 1'6" × 1'6" × 1'6" " " " " " " " 30" × 4"; max. 4 lbs.

Parcels:

Inland, greatest length 3'6", greatest length & girth combined 6'0" max. 11. lbs.
Imperial & Foreign, as for Inland parcels, for exceptions see P.O. guide. Limits of weight vary from 11 to 22 lbs.

INFORMATION SHEET: COMMON SIZES OF MISCELLANEOUS ITEMS.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1

INFORMATION SHEETS

• 31 •

COMMON SIZES OF MISCELLANEOUS ITEMS

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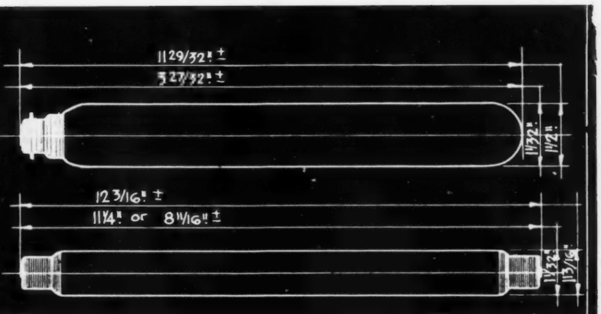
IN this and subsequent issues two Information Sheets will be included each week. This week a Sheet is given showing various common sizes that the architect often requires, and the first of a series of Sheets on electric lighting. Two more Sheets in this series will be given next week.

The following is a full list of the subjects previously issued :—

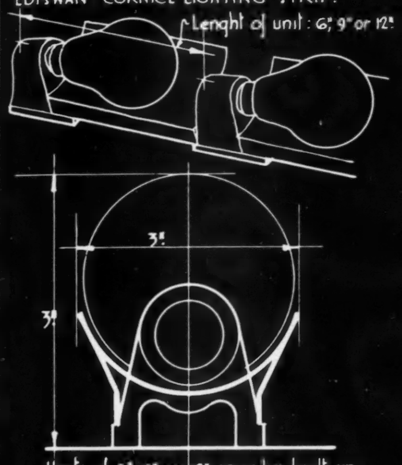
1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units : 1.
13. Apr. 12—Lavatory Units : 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs : 1.
23. June 29—Concrete Stairs : 2.
24. July 6—Pressed Steel Stairs : 1.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs : 2.
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes : 1.
30. Aug. 17—Lay-out of Wardrobes : 2.

DIMENSIONS OF TUBULAR LAMPS (approx.):

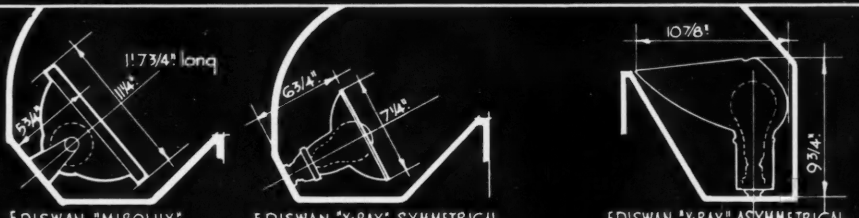
Type.	Wattage	Maximum diameter mm. . . . in's.	Overall length mm. . . . in's.	Standard Caps (E.S. = Edison screw.) (B.C. = Bayonet Cap.) (C.C. = Centre contact.)	Finishes
Single ended	25	26 . . . 1 1/32"	98 . . . 3 27/32"	E.S. B.C.	Opal, Clear or Colour sprayed
	40	38 . . . 1 1/2"	302 . . . 11 29/32"	E.S. B.C.	
	60	38 . . . 1 1/2"	302 . . . 11 29/32"	E.S. B.C.	
Double ended	30	26 . . . 1 1/32"	221 284 . . . 8 3/4" 11 1/4"	5/8" C.C.	Clear, Opal or Colour sprayed
	60	26 . . . 1 1/32"	284 . . . 11 1/4"	5/8" C.C.	
	100	46 . . . 1 13/16"	309 . . . 12 3/16"	3/4" C.C.	



EDISWAN CORNICE LIGHTING STRIP.



Units of 6", 9" or 12" may be built up into runs; maximum length of each run - 5'0".
Wattage may be varied from 15 to 75 w.



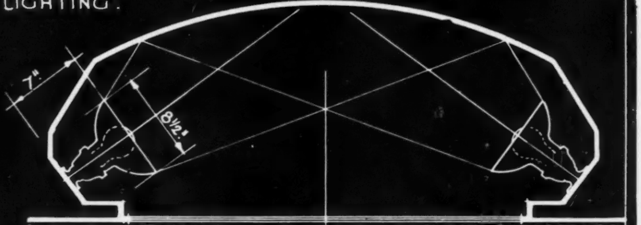
EDISWAN "MIROLUX" REFLECTOR takes two 100 watt or 150 watt lamps.

EDISWAN "X-RAY" SYMMETRICAL REFLECTOR takes one 100 watt lamp.

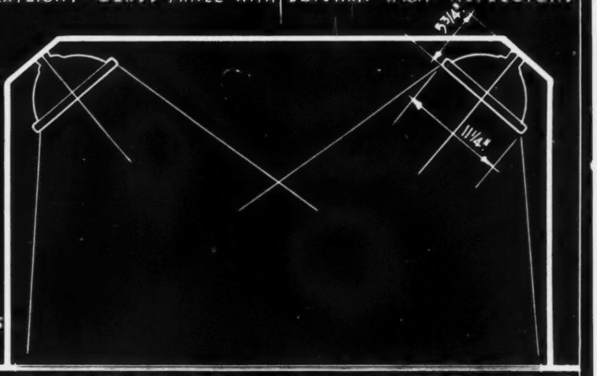
EDISWAN "X-RAY" ASYMMETRICAL REFLECTOR takes one 150 watt lamp.

TYPES OF REFLECTOR FOR CONCEALED LIGHTING.

ILLUMINATED PANEL LIGHTING.



"LAYLIGHT" GLASS PANEL WITH EDISWAN "X-RAY" REFLECTORS

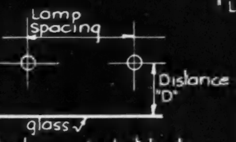


LAYLIGHT GLASS PANEL WITH EDISWAN "MIROLUX" TROUGH REFLECTORS.

ILLUMINATED PANELS.

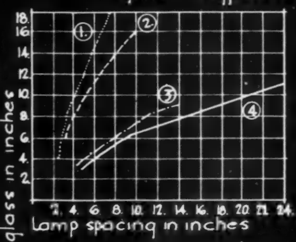
LAMP SPACINGS REQUIRED FOR EVEN ILLUMINATION

Extract from the Illuminating Conference Report 1932.



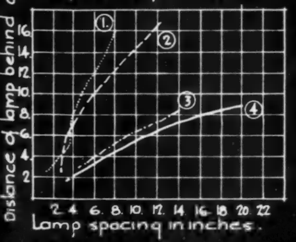
Distance "D" (in inches) of lamp behind glass.	Type of glass: Frosted Stipolite	Acid Etched sheet	Flashed opal	Acid etched flashed opal.
	Lamp spacing in inches.			
4"	3"	3"	5 1/2"	6"
6"	3"	3 1/4"	8"	9 1/2"
8"	3 1/2"	4"	12"	15"
10"	3 3/4"	5"	17"	21 1/2"

Notes: Acid etched sheet does not give such even brightness as others.
Wattage of lamps appears to be immaterial in regard to uniformity of light & spacing of lamps.
If lamps are unnecessarily far from the glass the general efficiency is reduced.



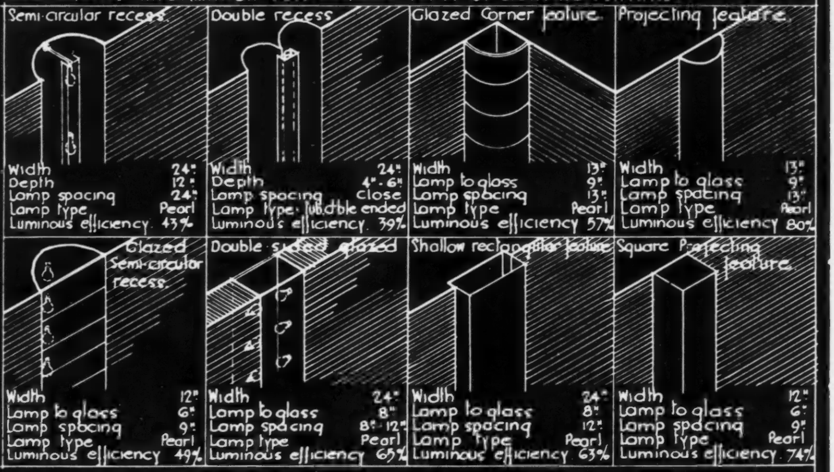
GRAPH GIVING SPACING OF LAMPS IN RELATION TO DISTANCE OF LAMPS FROM THE GLASS. FOR PEARL G.F. LAMPS.

① Frosted Stipolite
② Acid etched sheet
③ Flashed Opal
④ Acid etched Fl. Opal



GRAPH GIVING SPACING OF LAMPS IN RELATION TO DISTANCE OF LAMPS FROM THE GLASS. FOR OPAL G.F. LAMPS.

COMPARATIVE INFORMATION FOR VARIOUS TYPES OF LIGHTING FEATURE.



Semi-circular recess.	Double recess	Glazed Corner feature.	Projecting feature.
Width 24" Depth 12" Lamp spacing 24" Lamp type Pearl Luminous efficiency 43%	Width 24" Depth 4"-6" Lamp spacing close Lamp type tub. dble ended Luminous efficiency 39%	Width 13" Lamp to glass 9" Lamp spacing 13" Lamp type Pearl Luminous efficiency 57%	Width 13" Lamp to glass 9" Lamp spacing 13" Lamp type Pearl Luminous efficiency 80%
Glazed Semi-circular recess.	**Double sided glazed**	**Shallow rectangular feature**	**Square Projecting feature.**
Width 12" Lamp to glass 6" Lamp spacing 9" Lamp type Pearl Luminous efficiency 49%	Width 24" Lamp to glass 8" Lamp spacing 8"-12" Lamp type Pearl Luminous efficiency 65%	Width 24" Lamp to glass 8" Lamp spacing 12" Lamp type Pearl Luminous efficiency 63%	Width 12" Lamp to glass 6" Lamp spacing 9" Lamp type Pearl Luminous efficiency 74%

INFORMATION SHEET: ELECTRIC LIGHTING: TUBULAR LAMPS & ILLUMINATED PANELS.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

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ELECTRIC LIGHTING : I

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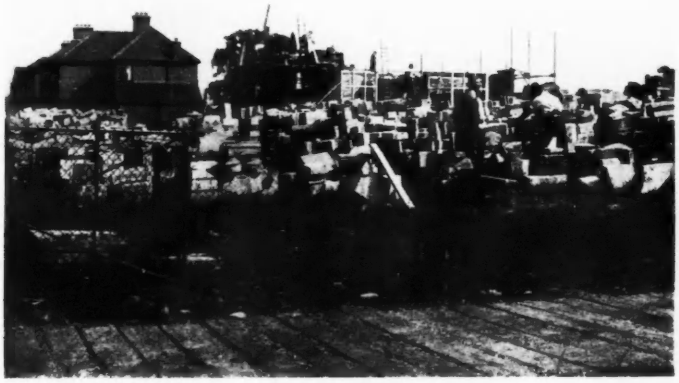
FOR a list of the Information Sheets previously issued, see the other Sheet accompanying this issue.

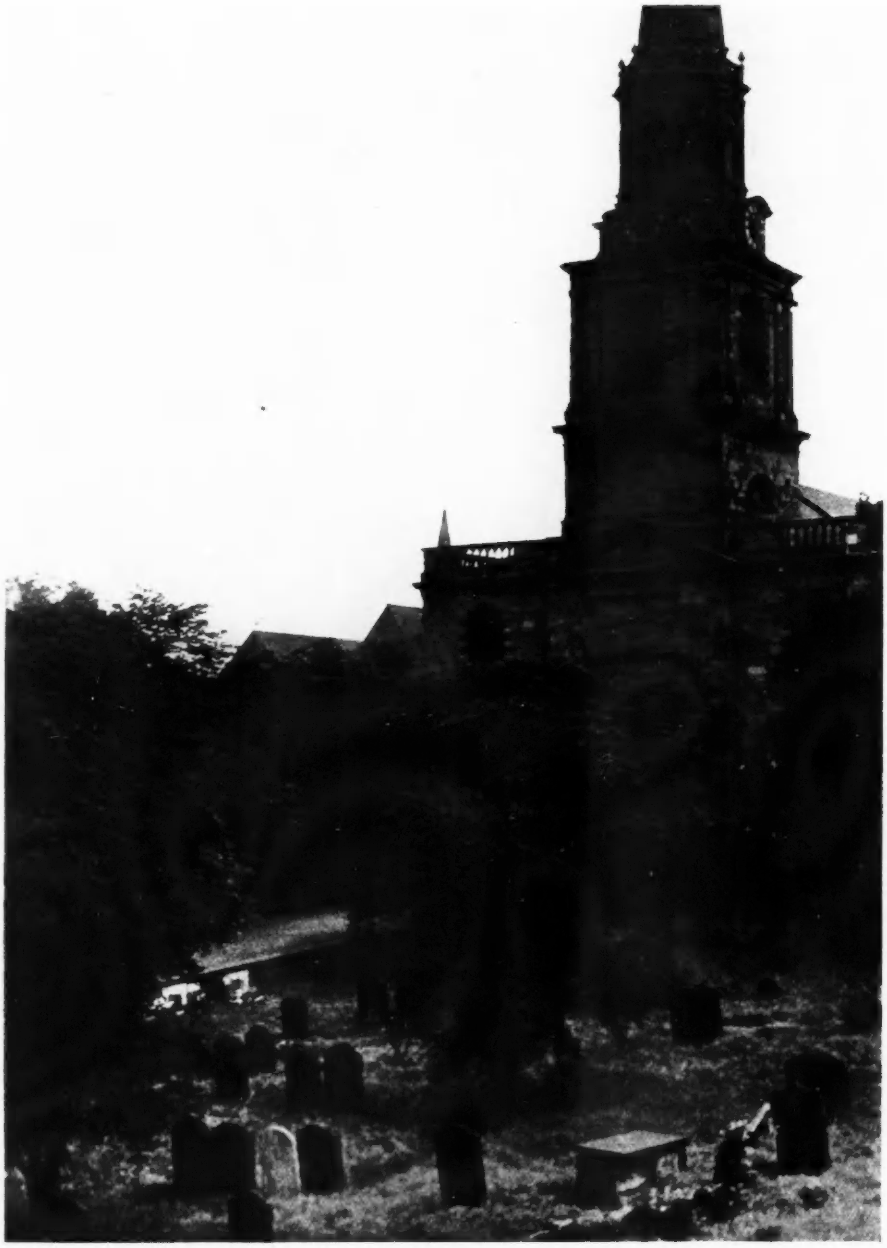
MOVING A CHURCH

FROM OXFORD ST. TO KINGSBURY



THE photograph shows St. Andrew's Church, Wells Street, Oxford Street, being re-erected on its new site at Kingsbury. New foundations have been built, but stonework and woodwork is original—moved from its old position under the supervision of the architect, Mr. W. A. Forsyth (Forsyth and Maule).

The date of the stonework is about 1700.

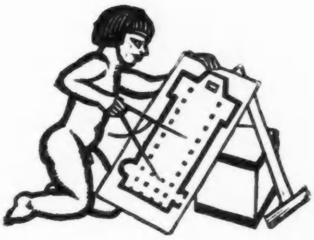


ST. JOHN'S CHURCH, WOLVERHAMPTON

St. John's Church at Wolverhampton, which was described by Astragal some two months ago, is not only a fine example of eighteenth-century church architecture (it was built in 1758) but is also part of a superb piece of eighteenth-century town planning.

It is surrounded by terraces and squares of eighteenth-century houses and has a sunk graveyard that flanks the axial approach. A sketch plan of the lay-out with the church in the centre appears on page 259.

The church unfortunately is badly in need of repair, the Perton freestone of which it is built having proved too soft to withstand the action of weather and factory fumes, and being badly decayed. It has been surveyed by Mr. Bertram Butler and an appeal is being made for funds to save it.



M.INST.R.A.

SIR EDWIN LUTYENS COUNTER-ATTACKS

WHEN our last leading article on the subject of the foundation of the new Institute of Registered Architects was published three weeks ago, the state of affairs in the controversy that this new Institute has occasioned was one of waiting for the next move.

The effect of Sir Edwin Lutyens' first announcement had been noted and the replies that it had brought forth from the R.I.B.A. and the Registration Council.

A large part of the responsibility for clearing up the confusion which had thus arisen seemed then to lie with the Registration Council.

To them we addressed in the same leading article a number of questions regarding their powers and intentions, which, it appeared to us, must first be answered before the process of justifying or refuting the accusations of which this controversy has consisted could begin.

Now Sir Edwin Lutyens has reinforced our appeal to the Registration Council with a new manifesto. Sir Edwin has obviously studied our leading article and he, too, in almost the same terms as ourselves, asks various questions of the Registration Council.

His letter runs as follows :—

SIR,—I have read with surprise the letters communicated to the Press by my old and valued friend Sir Giles Gilbert Scott and by Major Harry Barnes.

Sir Giles is the President of the Royal Institute of British Architects (R.I.B.A.) and Major Barnes is a former Vice-President and still a Fellow of the R.I.B.A., and also Chairman of the Architects' Registration Council, created by the Act of 1931.

Both of them seem to me to have rushed into print without endeavouring to find out why the Institute of Registered Architects was formed, and in Major Barnes's case without even troubling to discover that it had been formed, apparently under the delusion that the Institute is in some unexplained manner inimical to, or at least competitive with, the Institutions of which they are respectively the heads.

I am advised that both these letters are defamatory, but I am determined that (unless compelled) no action of mine, or of the Institute of which I have the honour to be President, shall cause that disruption in and harm to the profession which I am convinced would result from legal action, whether successful or not.

Believe me, sir, the idea that the Institute of Registered Architects is competitive with either the R.I.B.A. or the Architects' Registration Council is a complete delusion, and I am astonished that Major Barnes, to deal with him first, should write the phrase, "I do not know, and nothing in the communication which has been addressed to me enlightens me, as to what measures for the protection of Registered Architects are not either being or likely to be promoted by the Architects' Registration Council."

What, sir, does Major Barnes think his Registration Council can do ? It can and must register as a "Registered Architect" any person, devoid as he may be of any real qualification to the title, who applies before December 31, 1933, and can satisfy the Admission Committee set up by the Act that he was calling himself an "Architect" on January 1, 1932. And if that same "Registered Architect" commits some flagrant breach of the professional code that ought to be, but has not yet been, established for the architectural profession, it can direct an enquiry to be held by a Discipline Committee, also established under the Act, "in any case in which it appears to the Council that an inquiry is necessary" and can, if and when it has been so reported by the Discipline Committee, remove his name from the Register for "conduct disgraceful to him in his capacity as an Architect" or for a criminal conviction, ***but for no other cause.*** It also has, apparently, a limited power of approving of examinations which are in the future to have some say in entitling the aspirant to become a "Registered Architect"—but I ask Major Barnes, what else does he think his Council can do ?

Can his Council prevent anybody who chooses to do so from describing himself as an "architect" ? Can his Council even promote an amendment of the Registration Act ? Has his Council any power to prosecute for a flagrant infringement of the Act ? Has his Council as yet even appreciated the fact that *prima facie* they must register anyone who, on January 1, 1932, chose to call himself an "architect" ? Has his Council adopted a professional code ? Has it any, and if so what power to do so, and whence derived ? And if so, what powers have they to enforce it ?

I submit, sir, that Major Barnes has an altogether exaggerated and unjustifiable view of the status and powers of his Council, and apparently of his own powers as its Chairman.

As to Sir Giles Scott, I yield to no man in my respect for his personal qualifications, but as the President of the R.I.B.A. I suggest that he should have hesitated before accusing the new Institute of being "superfluous."

Does he maintain, can he ever believe, that the R.I.B.A. has done all it might have done or ought to do for architects ? Has it laid down a really effective professional code ? No. Has it succeeded in establishing an effective scale of fees recognized by the Courts of Law ? No. Has it managed to prevent anyone, who chooses to do so, from calling himself an architect ? No. How far has it succeeded in making the status of an architect comparable with that enjoyed by the legal and medical professions ?

Yet Sir Giles Scott ventures to deride the Institute of Registered Architects as "superfluous" and to ask all members of the R.I.B.A. and Allied Associations to "disregard" it.

Does not he realize that *now* is the opportunity ? That *now* is the time to weld all "Registered Architects" into one coherent body ? That *now* is the time to start working for a higher professional status ? That *now* is the time to work for amendments of the Act, which will make it impossible for an unqualified person to describe himself as an "Architect" ?

If there is one thing that appears to be reasonably certain in this uncertain world, it is that the President of the Royal Institute of British Architects and the Chairman of the Architects' Registration Council have wholly failed to appreciate the ideals for which the Institute of Registered Architects stands.

One other matter : Sir Giles Scott has impliedly asserted that every member of the R.I.B.A. who has joined the Institute of Registered Architects has contravened his Membership

Declaration. High legal authority assures me that this assertion is absurd, and can safely be "disregarded" by those who have joined and those who purpose joining the new Institute.

In conclusion, I would ask both Sir Giles Scott and Major Barnes this question: What possible axe do you suppose I have to grind, except the advancement of our profession and the enhancement of the professional status of the generations of architects to come? Can you suppose that I have anything personally to gain?

I am, Sir,
Your obedient servant,
EDWIN L. LUTYENS, R.A.
President of the Institute of Registered Architects.

To make the position even clearer we print again the questions which we put three weeks ago to the Registration Council:—

Does clause 13 (*f*) allow the Council to promote measures covering the most important objects of the new Institute?

Can it establish a code of professional practice for the guidance of Registered Architects, and, if so, should a code and scale of fees be drawn up forthwith?

Would infringement of such a code by a registered member render him liable to expulsion from the register?

Has the Council defined what a Registered Architect should be?

How many architects accepted for Registration are not members of the R.I.B.A. or of a similar body?

It is now even more evident that these questions must be answered before representation and control in the architectural profession can hope to emerge from its present chaotic condition.

NOTES & TOPICS

GOOD AND BAD ROOFING

THERE has been a deal of sneering from the "save-the-countryside" enthusiast at patent roofing. Some of it is abominably ugly; agreed. And some of it, on the other hand, is not only cheap, but perfectly capable in good hands of being used with distinction on small domestic work.

*

What we want, said a friend who is working out small standard house units, are sections of roofing of a scale adaptable to cottages, something to replace the very large factory sheets.

Not only is this true of asbestos cement products, but of corrugated iron, which could be more largely used if it were made in sections that no longer recalled the mining camp.

*

The worst spoliation goes on in the very cheapest type of house. That is where we have got to propound our cure.

*

TRAINING THE FUTURE COMMERCIAL ADMINISTRATORS

The Department of Business Administration of the London School of Economics has secured the support of a number of big, nationally known firms in the excellent work it is doing in the training of students for administrative careers in commerce and industry.

*

Marketing, including retail management and sales management, production, finance and statistics are all included in the Department's main course.

*

The teaching (and this is real wisdom) is kept in the closest touch with reality through discussions opened by business men and by visits to factories, shops and offices, and through the use of what is known as the "case method." "Cases" are actual business problems which have been furnished by over a hundred firms.

*

Industrial design would be standing proudly on both feet, instead of having one foot in the cradle, if the art school and art training colleges of the country would borrow some of the practical sense that actuates this Department of the London School of Economics. Fancy what the application of the "case method" would mean to students who hope to make a living out of designing for modern industry, and whose art masters haven't an idea in their heads about commerce and industry except posters.

*

AND YET ANOTHER EXHIBITION

The Chocolate and Confectionery Exhibition opened at Olympia this week in the Empire Hall. As it is primarily a trade show, and the stands have to impress that retrogressive class of retailer, the confectioner, the arts of display have been deprived of any dangerously exciting elements.

*

But one or two stands are well designed. Notably those of firms supplying accessories. One vigorously original idea in sweet display has emerged. Transparent boiled sweets are shown on one of the stands in a sort of glass sandwich.

*

Light pours up through this core of sweets and gives a brilliant effect and shows to the best possible advantage the colours and luscious transparency of the sweets. This stand has portholes let into the counter, glazed with different coloured sweets.

*

Many of the stands show considerable imagination in their treatment, but a capable designer would have pulled them together and made them ten times more effective.

HOLIDAY GOOD TASTE

Apropos last week's leading article's admonition in the matter of holiday tasks, I learn on good authority that, incredible as it may sound, Mr. Betjeman's book *Ghastly Good Taste* has been set as a holiday task to the pupils of a girls' school.

*

One expects that one by one the winged words of architectural culture will find their seeding ground often in places the most unexpected, but that the seminary doors should open to the wicked laughter of Mr. Betjeman, a whole book of him, runs ahead of all propaganda programmes.

*

Mr. Betjeman, in conversation, assured me that it was nothing strange, the very irreverance of the title endearing itself by its association with school-girl slang to promote an entry into the most immature and uninstructed female breast.

*

BEHIND THE SCENES OF SALESMANSHIP

"The English, ah, the English, don't say anything at all!" Kipling once wrote in a verse that praised the inarticulate character of the average Englishman. They don't say anything, even when four senses are outraged (as they are in the average English hotel), and you have to knock an Englishman down before he'll speak, and then he'll probably be strong and silent and knock you down without speaking at all.

*

Sight, smell, taste and hearing are all subjected to grave indignities in modern England, and industries are thriving on our insensitiveness.

*

I was treated to a very candid view of these national failings last week by an able organiser who was making a good, easy profit out of them. I was shown over a Continental hotel (never mind where) that was run by an English manager, who prided himself on getting the "home atmosphere." If dull food, indifferent service, shoddy decoration and furnishing and an abundance of what might be called sentimental shepherding of flocks of tourists represented the "home atmosphere," then he had got it all right.

*

"We only get English people here," he said, adding with charming frankness: "you see they're so easy to please. We'd never get away with it with French or Germans or Americans; but the English never complain about their food."

*

Then he became very confidential, and, dropping his voice, said: "They don't mind what they have if they smell a bit of garlic coming from the kitchen. That gives 'em the foreign touch, you know."

*

That sheepish, uncritical acceptance of anything is the explanation of our slums and of those potential slums—the jerry-built suburbs of post-war England.

*

LANCASHIRE ABROAD

Going further afield, into that land of professional mountains and picture-post-card scenery, Switzerland, I was encouraged by an incident in one of those large baroque cathedrals that one usually associates with Italy. This was a classic building, staid and dull without, blanched and well-proportioned within, but loaded like a French rococco salon with carved and gilded ornament.

Beside the Acropolis; a school, just completed in Athens, from the designs of P. Karantinos.

*

Gazing up at all this decorative congestion, I overheard an obviously Lancashire tourist say: "Ee, but they'd have noon o' this mook if they'd seen Ely."

*

THE PROFESSIONAL MYSTERIES

"Architects used to be men of the world," said a critical friend of mine recently, "but now they are specialists."

*

I murmured something about this being an age of specialists, but he snapped at me: "That's just another way of saying it's an age of technical mysticism."

*

I was reminded of a few of the jobs architect friends of mine have been tackling lately, and I explained, perhaps too painstakingly because he interrupted me rather a lot, that the modern architect has to be not only an able designer, but a man of the world in its widest social sense, for he has to know all sorts and conditions of life. Moreover, he must be something of an economist, a diplomatist, and a first class man of business.

*

No, there's not much danger of the modern architect laying his ideas in the narrow coffin of the specialist.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, August 31

R.S.A. INDUSTRIAL DESIGNS COMPETITION. At the Imperial Institute, South Kensington, S.W. Exhibition of the designs submitted in the tenth annual open competition. Last day. 10 a.m. to 5 p.m. 10 *a.m.*

EXHIBITION OF COTSWOLD ART AND CRAFTSMANSHIP. At the Alcuin Press, Chipping Campden, Glos. 11.30 a.m. to 7 p.m. Until September 2. 11.30 *a.m.*

Saturday, September 2

Sunrise 6.14 a.m. Sunset 7.45 p.m.

NEWS

●

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A superb piece of eighteenth-century town planning 254

A holiday task for the pupils of a girls' school 257

"Oh, no," said the caretaker, "you'll never get permission to get inside. His Lordship never lets anyone in." 264

Thirty years ago no English sculptor used a hammer and chisel. To-day half of them do........ 266

Nearly ninety per cent. of all houses in Canada and the United States are roofed with red cedar shingles or tiles 273

Where the municipal authorities insisted on a pitched roof "to preserve the amenities of the district" 277

●

SLUM

Up to the time of going to press the number of slum clearance schemes submitted by local authorities to the Minister of Health, as required by the Minister's five-year plan, set out in circular 1331, is 53 out of a total of 1717 housing authorities in the country.

THE BUILDING CENTRE COTTAGES

The Minister of Health has indicated that he will raise no objection to the erection by local authorities or others of cottages to the design of those erected for demonstration purposes on the Aldwych site, Strand, from the winning design in the Building Centre Cottage Competition.

As regards the building of such cottages for the rehousing of persons displaced from clearance of improvement areas or from individual unfit houses, the Minister has intimated that, in view of the dimensions of the cottages, it will be necessary to adopt as a standard of accommodation for the purposes of the Housing Act, 1930, the rule that the cottages should be treated as providing accommodation for not more than four persons, which means that four units of Exchequer grant totalling £9 (or £10 in respect of persons displaced from houses in an agricultural parish) will be payable in respect of approved rehousing accommodation provided in a cottage of this type.

ORGANIZE AHEAD

The winter seasonal decline in trade and employment in the building industry has already commenced, and is likely to continue until the spring of next year. This entirely unnecessary annual loss of trade is, by proper organization and education, avoidable. The Special Committee for Public Relations is drawing up proposals for the purpose of mitigating this annual loss. The educational campaign of the Committee, however, must be fully supported by the industry if mitigation to any material extent is to be achieved. Subscriptions on behalf of the efforts of the Committee should be forwarded to the Hon. Treasurer, 5, Duke Street, Adelphi, W.C.2, and should be made payable to the Special Committee for Public Relations.

BATHING POOL FOR MARGATE?

The Margate Corporation are considering the provision of a large bathing pool estimated to cost £100,000.

TOWN PLANNING INSTITUTE

The fifteenth annual country meeting of the Town Planning Institute will be held at Cardiff from October 6 to 8, inclusive, under the chairmanship of the President of the Institute, Mr. T. Alwyn Lloyd, F.R.I.B.A. The meeting will open on Friday afternoon, October 6, which will enable members to take advantage of the cheap week-end tickets issued by the railway companies.

The Lord Mayor of Cardiff (Alderman C. F. Sanders, J.P.) will extend an official welcome to the delegates; papers on town planning matters will be presented; and visits will be made to places of interest in Cardiff and district.

The meeting is not confined to men or members of the Institute only—visitors are invited. Full particulars are obtainable from Mr. Alfred R. Potter, Secretary, 11 Arundel Street, Strand, W.C.2.

Following are the names of the officers of the Town Planning Institute for the year 1932-1933: President: Mr. T. Alwin Lloyd, F.R.I.B.A.; vice-presidents: Messrs. H. H. Humphries and L. Roseveare; hon. vice-presidents: Rt. Hon. Neville Chamberlain, P.C., M.P., Sir Theodore Chambers, K.B.E., F.S.I., Rt. Hon. Sir Leslie Scott, K.B.E., F.S.I., and Sir Raymond Unwin, PP.R.I.B.A. Representative of hon. members on Council: Mr. W. Rees Jeffreys. Representative of Associates on Council: Sir Selwyn Freemantle; hon. secretary: Mr. G. L. Pepler; hon. auditor and hon. editor: Mr. E. G. Culpin, F.R.I.B.A.; hon. librarian: Mr. E. G. Allen.

LECTURES ON HOUSING

A series of five non-technical lectures on the housing problem has been arranged by the Architectural Association to take place on alternative Saturdays during October, November and December. Following is a list of the lectures: October 14—"Slums in Town and Country"; October 28—"The Solution for the Town"; November 11—"The Solution for the Country"; November 25—"How the Problem is Solved Abroad"; December 9—"The Housing of the Future." Each lecture will commence at 3 o'clock.

MR. W. CURTIS GREEN

Mr. W. Curtis Green, R.A., who was knocked down by a Green Line bus near Victoria Station on Monday of last week, and suffered slight concussion, has left St. George's Hospital. He is now at home and is said to be progressing satisfactorily.

POST OFFICE OVERHEAD LINES

Following representations made to the General Post Office by the Council for the Preservation of Rural England with regard to the erection of post office lines, instructions have been issued by the P.O. Engineering Department to guide engineers in constructing overhead routes in certain parts of the country.

It is pointed out that it is desirable that superintending or sectional engineers should work in harmony with the C.P.R.E. and similar bodies so far as is practicable, and that it has been agreed that any representations made regarding a proposed overhead line shall be given careful consideration. Normally, it will be left to a society or association to take the initiative, but in cases where it seems desirable, the superintending or sectional engineer may at his discretion consult a local society or the local representative of the C.P.R.E. before definitely selecting new pole sites, and the wishes of the society or local representative will be met as far as possible, provided that this does not involve the department in any appreciable extra expense.

It is also stated that, in selecting routes, care should be taken to make the least possible interference with the amenities of a district; for example, to avoid pole sites close to a building or church of architectural or archæological interest, or the placing of overhead plant in positions to interfere with the view of such places.

Reports will be called for at the end of the year to see whether consultation with the local representative of the C.P.R.E. has involved delay in the provision of circuits or other serious drawbacks.

ST. PAUL'S CATHEDRAL

The authorities of St. Paul's Cathedral have decided that the observation scheme which has been in operation in connection with the fabric for nearly three years shall be continued for a further period of the same duration.

NATIONAL HOUSING AND TOWN PLANNING COUNCIL

The National Conference of Local Authorities in Great Britain convened by the National Housing and Town Planning Council is to be held at Malvern from November 24 to 27 inclusive.

Full particulars are obtainable from Mr. John G. Martin, Secretary, National Housing and Town Planning Council, 41, Russell Square, London, W.C.1.

GOVERNMENT BUILDINGS IN WHITEHALL

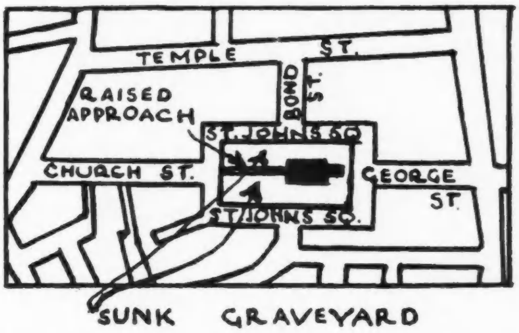
We are informed that it has been officially decided to appoint an architect to prepare plans for the proposed block of Government offices in Whitehall. The site of the proposed buildings extends from Horse Guards Avenue to Richmond Terrace, stretching back to the Embankment. The cost is estimated at £2,000,000.

ARCHITECTURE IN 1940

In a letter that appeared in *The Times* last Friday under the above heading, Mr. Christian Barman discussed the question of the general acceptance of the modern idiom in domestic architecture and the doubt many people feel as to its genuineness.

"If we want to find the right answer," Mr. Barman wrote, "to questions such as these it is necessary to realize that the modern architect, when he applies himself to the living room and the individual home, is in fact following a by-path. He is taking a part of his work out of its proper sequence for purposes of study and experiment. It is true that he is doing this not from choice but from necessity. But consider for a moment what it is that modern architecture has got to do. It has come about in a response to new and revolutionary demands. New kinds of structures are urgently required to allow the social mechanism to function properly. . . . And it is just where the changes have been greatest that the new equipment will be wanted most, and wanted first. The modern designer must look first to the architecture of those places where many thousands meet together to work or travel, to educate or amuse themselves, or to seek health and fitness or merely the company of their fellows. . . .

"If this is true, it follows that the private residence of 1933, far from being a finished product to be approved or disapproved as such, must rather be looked upon as a convenient medium for the development of structural forms that can only come to full growth elsewhere. In its proper time the new individual dwelling will undoubtedly follow. We must not let ourselves be deluded by the fact that for every truly modern school or factory of conspicuously first-rate design there are 10 or 20 private houses or flats of the same quality. There is a very simple explanation of this fact. Not very many people, as yet, have the vision and the pluck to accept the life of the nineteen-thirties as a determining factor in the design of a building they are to own; and those that have are more likely to be found where the enterprises are small and the outlay involved proportionately modest."



Lay-out plan of the neighbourhood of St. John's Church, Wolverhampton. See the frontispiece to this issue.

Mr. Barman's letter was followed on Tuesday by a letter from Mr. C. F. Annesley Voysey under the same heading pointing out that the restlessness caused by increased transport facilities was largely responsible for the modern love of change, and therefore, together with new constructional methods, for the departure from tradition.

Mr. Voysey concluded: "The new methods of construction and the increase of mass production must naturally affect the architecture of hospitals, shops, factories, and large buildings generally. But in domestic architecture there is still opportunity for the use of traditional structure, and let us hope domestic architecture will continue to be a very slowly developing record of our mode of life."

MEMORIAL TO LADY CYNTHIA MOSLEY

We understand that Sir Edwin Lutyens, R.A., P.I.A.A.S., has completed his plans for the memorial to Lady Cynthia Mosley, which is to be erected at Savelay Farm, Denham, Bucks.

MANCHESTER SOCIETY OF ARCHITECTS

Members of the Manchester Society of Architects paid a second visit, on August 24, to the New Town Hall, Stretford, which is now nearing completion from the designs of Messrs. Bradshaw Gass and Hope. It is to be opened by Lord Derby on September 16.

THE MODERN SPIRIT IN ARCHITECTURE

A series of five weekly lectures on "The Modern Spirit in Architecture" is to be given by Mr. Frederic Towndrow, A.R.I.B.A., at Morley College, Westminster Bridge Road, S.E., during November and December. The lectures, to be held on Tuesday evenings, are as follows: November 14—"Modern Architecture"; November 21—"The New Architecture of Austria, Germany and France"; November 28—"The New Architecture of Holland, Denmark, Sweden and America"; December 5—"The Contemporary Architecture of Great Britain"; December 12—"The City of the Future."

HOUSING PROGRESS IN BERMONDSEY

The Bermondsey Council are to begin work at once on a housing scheme estimated to cost £25,000.

GLASGOW HOUSING EXHIBITION

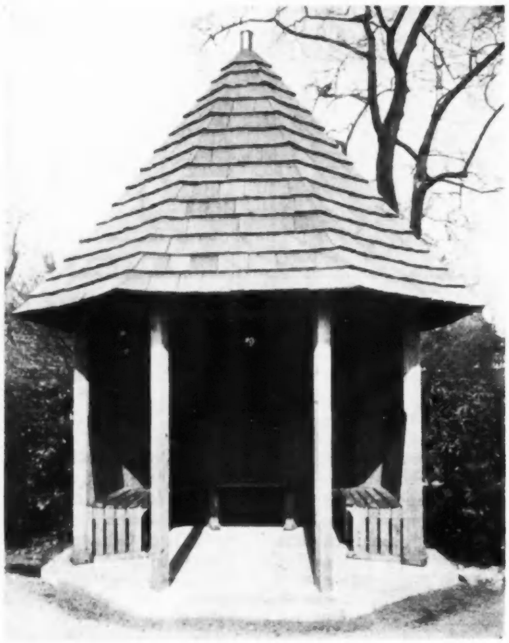
The Glasgow Municipal Housing and Health Exhibition is to be held in the Kelvin Hall from October 4 to 28.

COMPETITION

NEWS

BELFAST SANATORIA COMPETITION

There has been a surprising development in the Belfast Municipal Sanatoria Competition, which is open to architects resident in Northern Ireland (writes our Irish correspondent). The Tuberculosis Committee of the Corporation has now decided to offer three prizes of 500 guineas, 250 guineas and 50 guineas, for the designs placed first, second and third, instead of the two prizes of 100 guineas and 50 guineas which were formerly offered. This decision was made at a special meeting of the Committee, when approval was given to the arrangements made by the assessor, Mr. R. S.



The new garden shelter in Cambridge Cottage Garden, Kew Gardens. It was designed by Mr. J. H. Markham, of H.M. Office of Works, and is entirely constructed in Western red cedar from British Columbia, the framing on the closed sides being covered externally with sawn weather-boarding and panelled internally, and the roof being of riven cedar shingles.

Wilshere, A.R.I.B.A., P.A.S.I., who is architect to the Municipal Education Committee. It now remains for the Corporation to sanction the Committee's proposals before designs can be invited.

When, some months ago, the Committee decided to undertake the sanatoria extension scheme the Architect's Department of the Corporation was instructed to prepare plans, but these, although sanctioned by the Northern Ireland Government, were subsequently rejected by the Committee, and the competition plan adopted. In explanation, Councillor W. A. Cochrane, J.P., the Chairman of the Committee, said that after inspecting the principal sanatoria in England, the Committee's deputation had come to the conclusion that they could greatly improve on their own original plans. "We want a plain building," he added, "with the requisite accommodation and ample provision for sun, air and light, so that the best modern treatment can be assured for this terrible disease so rife in Belfast."

He estimated the scheme to cost about £80,000.

Competitions Open

September 1.—Sending-in Day. Proposed Hospital at Surbiton. Assessor: C. E. Elcock, F.R.I.B.A. Premiums: £120, £75, £50 and £25.

September 11.—Sending-in Day. The Directors of Gidea Park, Ltd., invite designs for five different types of house (ranging from £400 to £900). Assessors: Prof. S. D. Adshead, F.R.I.B.A., A. E. Beresford, F.R.I.B.A., Ald. Ewart G. Culpin, F.R.I.B.A., E. Maxwell Fry, A.R.I.B.A., Howard Robertson, F.R.I.B.A., and W. Harding Thompson, F.R.I.B.A. In addition to being paid a fee according to the scale of charges of the R.I.B.A., the authors of the first five selected designs in each class will be paid a premium of £10. Particulars obtainable from Gidea Park, Ltd., The Estate Office, Hare Street, Gidea Park, Romford, Essex. Deposit 5s.

September 21.—Sending-in Day. Proposed Town Hall for the Borough of Hornsey. Assessor: C. Cowles-Voysey, F.R.I.B.A. Premiums: £350, £250 and £150. Full conditions, etc., were published in our issue for May 17.

September 30.—Competition for speculative house designs, organized by the Architectural Association with the co-operation of Messrs. J. Laing and Sons, Ltd. Three types of house are required. Assessors: C. Lovett Gill, F.R.I.B.A.; L. H. Bucknell, F.R.I.B.A.; J. R. Leathart, F.R.I.B.A.; Arthur W. Kenyon, F.R.I.B.A.; T. Alwyn Lloyd, F.R.I.B.A.; and J. W. Laing. Premiums: £25 for the design placed first in each group. Copies of the conditions are being issued free, on application, to all members of the Architectural Association, and members of the R.I.B.A. can obtain copies (price 2s. 6d.) from Mr. F. R. Yerbury, General Secretary, The Architectural Association, 34-36, Bedford Square, W.C.1. Full particulars of the competition were published in *A.J.* for July 27.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Development of the coastguard site, Bexhill. Assessor: T. S. Tait, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere A.R.I.B.A. Conditions are now being drawn up by the assessor.

Decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas.

Conditions governing the competition, which closes on December 15, 1933, will be issued on September 30 next.

Proposed town hall and municipal buildings, Stoke Newington. Assessor: Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

R. I. B. A.

EXAMINATIONS

The questions set at the Intermediate, Final and Special Examinations, held in June and July 1933, have been published, and are on sale at the Institute, price 1s. (exclusive of postage).

THIS ARSHETECTURE

Controversy continues between Sir Giles Gilbert Scott and Sir Edwin Lutyens regarding latter's sponsoring of new "Institute of Registered Architects."

Latest move is issue to Press of reams of pro-Lutyens publicity, including four pages of special notes (prepared by "a friend" of Sir Edwin) "which may be of some use to your 'gossip-column' writer."

From these notes I learn that Sir Edwin, besides being "universally recognized as 'the modern Wren' and the Empire's greatest architect,"

has a small drawing-board in his car,

is a fine figure of a man,

plays no games,

says Waterloo Bridge is "a jolly thing,"

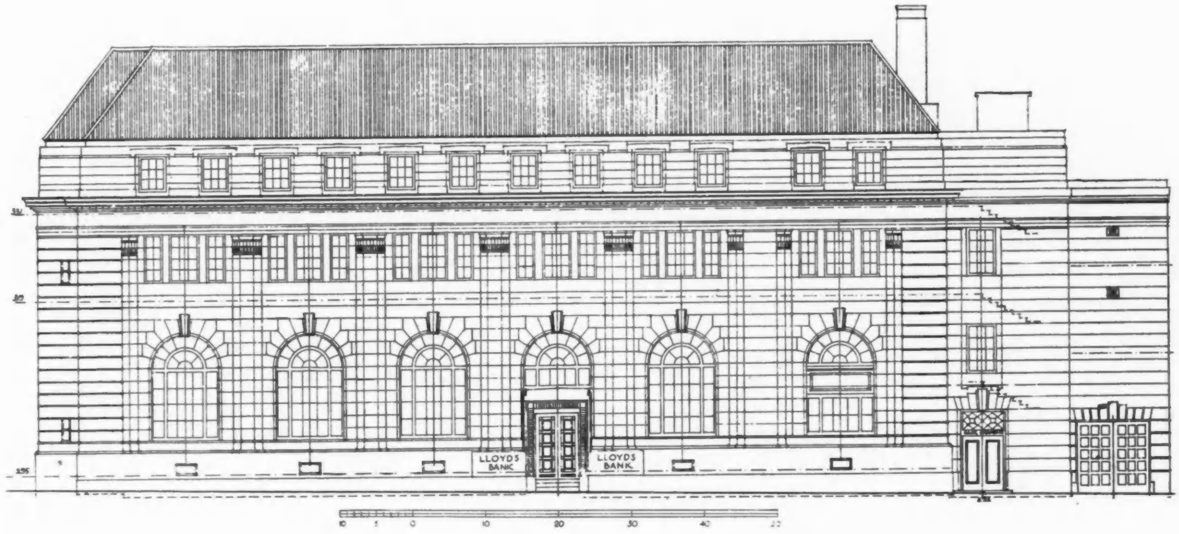
says steel furniture is the kind of furniture he wouldn't steal,

says the future of women in the architectural profession depends upon which architect they marry,

says the Crystal Palace ought to be put under a glass case.

—*From* THE DAILY EXPRESS

LLOYDS BANK, COVENTRY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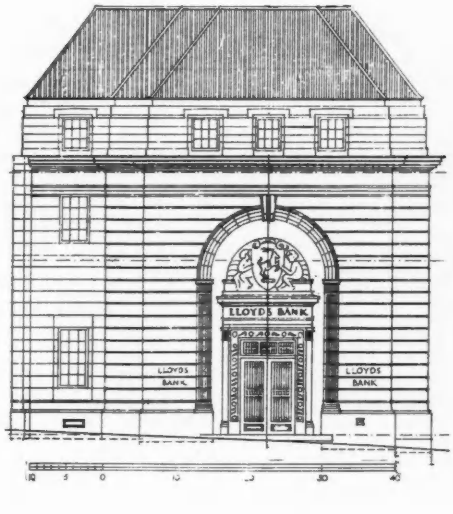
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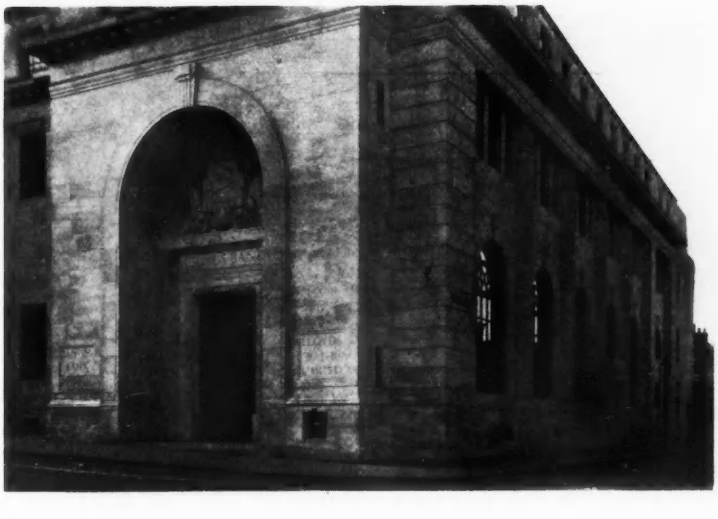
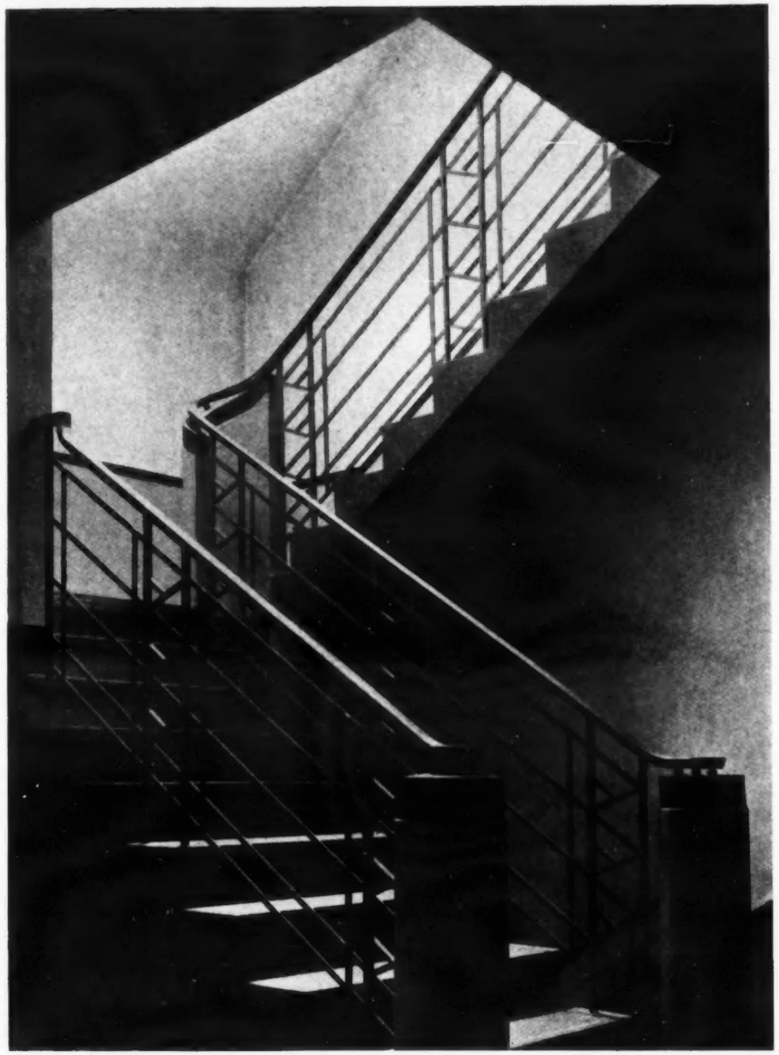


Above are drawings of the two street elevations of the Bank, with a general view showing both frontages. Views of the interior are given on the pages following.

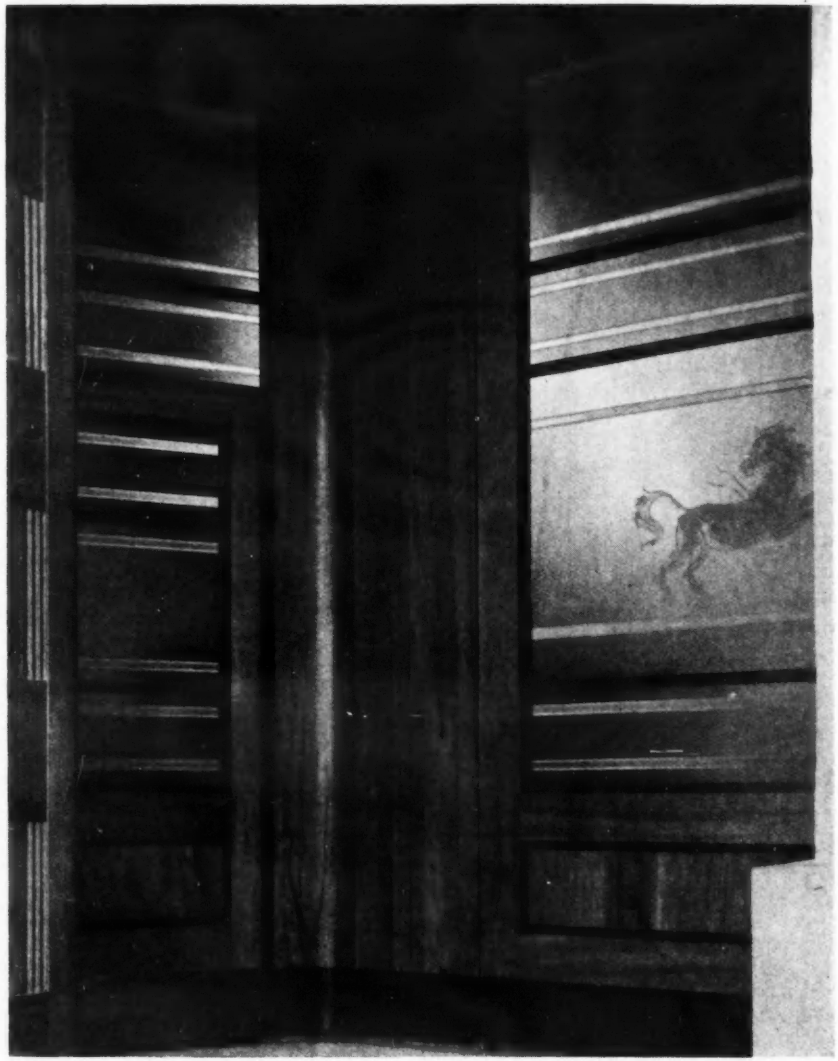
The exterior is of Portland stone, with windows of teak and a tiled roof. The external steps are of artificial Hopton Wood stone. The internal fittings and porches are of Ancona walnut with rosewood inlay.

DESIGNED BY BUCKLAND AND HAYWARD

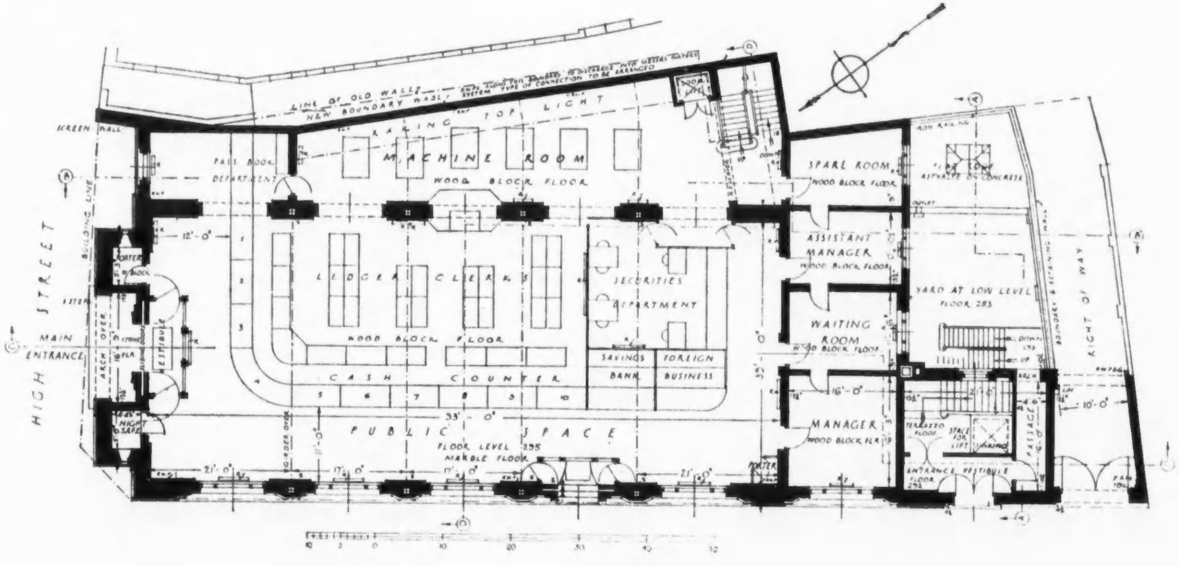
LLOYDS BANK, COVENTRY

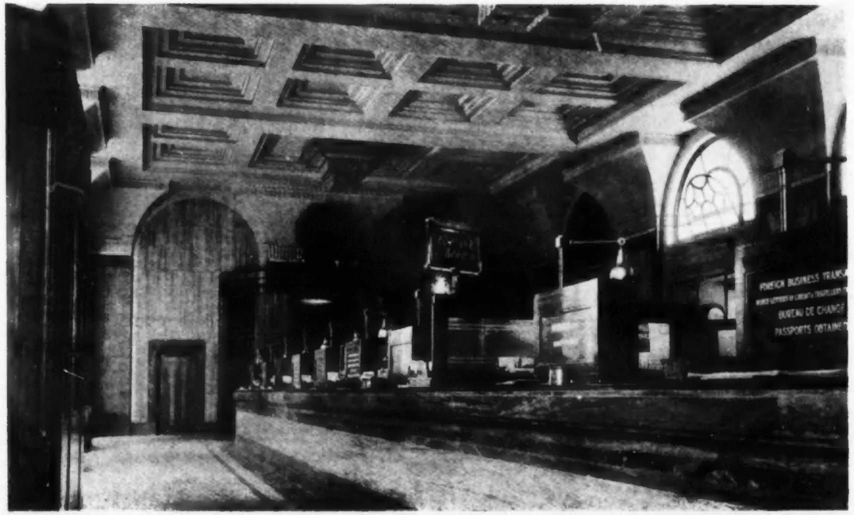


A Staircase.



The Entrance Vestibule.

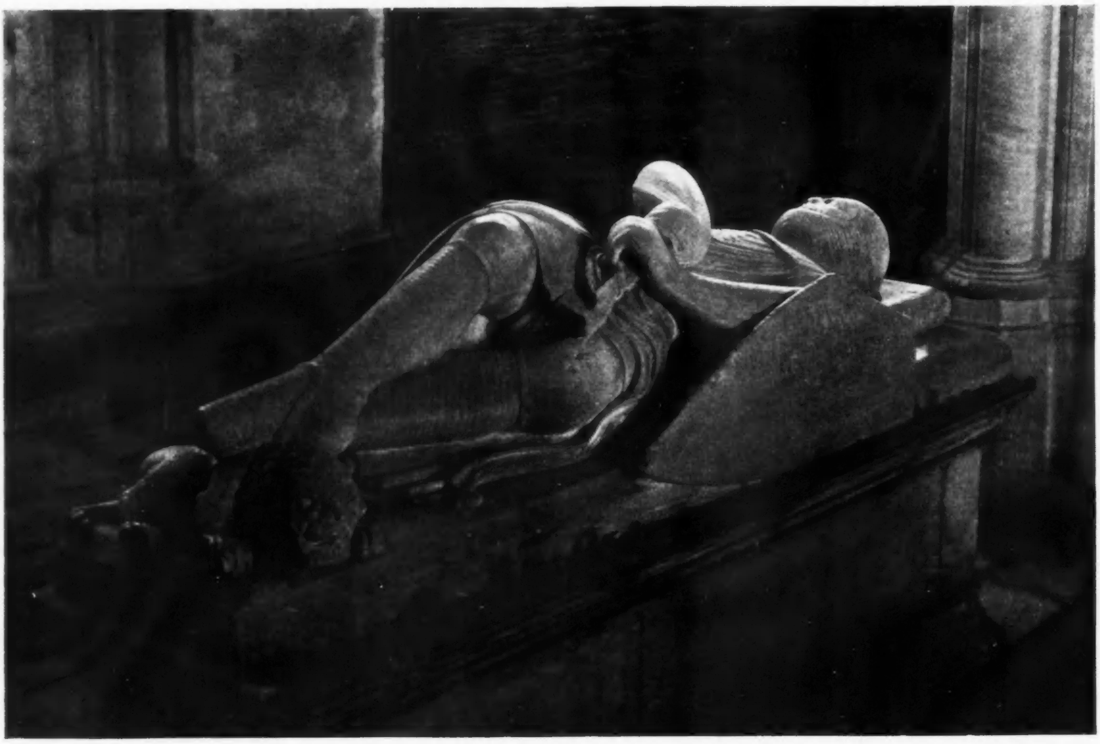

HIGH STREET
MAIN ENTRANCE
SCREEN WALL
BUILDING LINE
ARCH OVER
PORTER
NIGHT SAFE
VESTIBULE
PASS BOOK DEPARTMENT
MACHINE ROOM
WOOD BLOCK FLOOR
LINE OF OLD WALLS
NEW BOUNDARY WALL
TOP LIGHT
LEDGER CLERKS
SECURITIES DEPARTMENT
SAVINGS BANK
FOREIGN BUSINESS
CASH COUNTER
PUBLIC SPACE
FLOOR LEVEL 295
MARBLE FLOOR
SPARE ROOM
ASSISTANT MANAGER
WAITING ROOM
MANAGER
YARD AT LOW LEVEL
FLOOR 283
RIGHT OF WAY
PASSAGE
ENTRANCE VESTIBULE
SPACE FOR LIFT
12'-0"
21'-0"
17'-0"
33'-0"
16'-0"
10'-0"



The ground floor plan of the Bank and a view of the interior of the banking hall. The walls of the banking hall are lined with yellow German travertine, with an inlay of green Connemara marble at the frieze line. The ceiling is in plaster, coloured a pale green and sprinkled with gold, and the floor is of rubber in the public space, and linoleum behind the counter.

DESIGNED BY

BUCKLAND AND HAYWARD



A knight in Purbeck Marble, from Dorchester Abbey, Oxfordshire. c.1310. See Eric Kennington's letter on this page.

LETTERS *FROM* READERS

ERIC KENNINGTON

RATEPAYER

The Frustrated Schoolmaster

SIR,—Your review of *English Church Monuments** made me hopping mad, for two reasons. First, because your reviewer has seen the state of affairs, and is cracking our skulls for permitting or creating it. Secondly, because he is blind of one eye.

Of course he is right. "WE tabulate, research, collect information about the superb monuments that lie around in town and countryside. WE are deaf and blind to their message. WE are fools who betray our heritage"—and what he has seen and written is noticed by mighty few. That is, that among our 2,000 recumbent images there are many world's masterpieces, and they are English, or rather British; carved by British sculptor-masons and expressing British ideals, types and individuals.

No country but spiritual Britain could have produced, in so short a time, a sequence of such variety, surprise, inconsistency, personality, peace, savagery, self-assertion, humility, inspiration, absence of principle, crudity and technical perfection. Do we appreciate them?

Subject to hypnosis we go thousands of miles in train and boat to see what we are told is fine sculpture. To know anything about our own sculpture, which your reviewer considers "among the greatest works that sculpture can show," we must obtain one of three costly books by Gardner, Cox or Crossley. Guide books have scant reference or none to the effigies in a church, unless it is of a notability such as Longespee, or a legendary invention such as the "Boy Bishop." Photographs are almost unobtainable, save as chance parts of architectural interiors.

An instance of our guardianship: at Hughenden, a score of miles from London, there is a carved white cadaver of rare beauty and in perfect condition (I doubt if any other sculpture has more of the stillness and dignity of death). Last year I saw the top of its head, behind a large cupboard full of surplices, etc.; splendid knights are all around. The sexton was annoyed because I wanted to move the cupboard. Better to study a knight, I removed a halfpenny and an inkpot from his chest. Some few miles away I peered through a glass door into the Bedford chapel at what appeared to be four or five centuries of British chivalry. These are better cared for. "Oh, no," said the caretaker, "you'll never get permission to get inside. His Lordship never lets anyone in."

Haccombe is within sound of motor-horn from Torquay. Why did the chapel-keeper say to me: "We seldom have visitors"? Because the guide-book, though it notes the horse-

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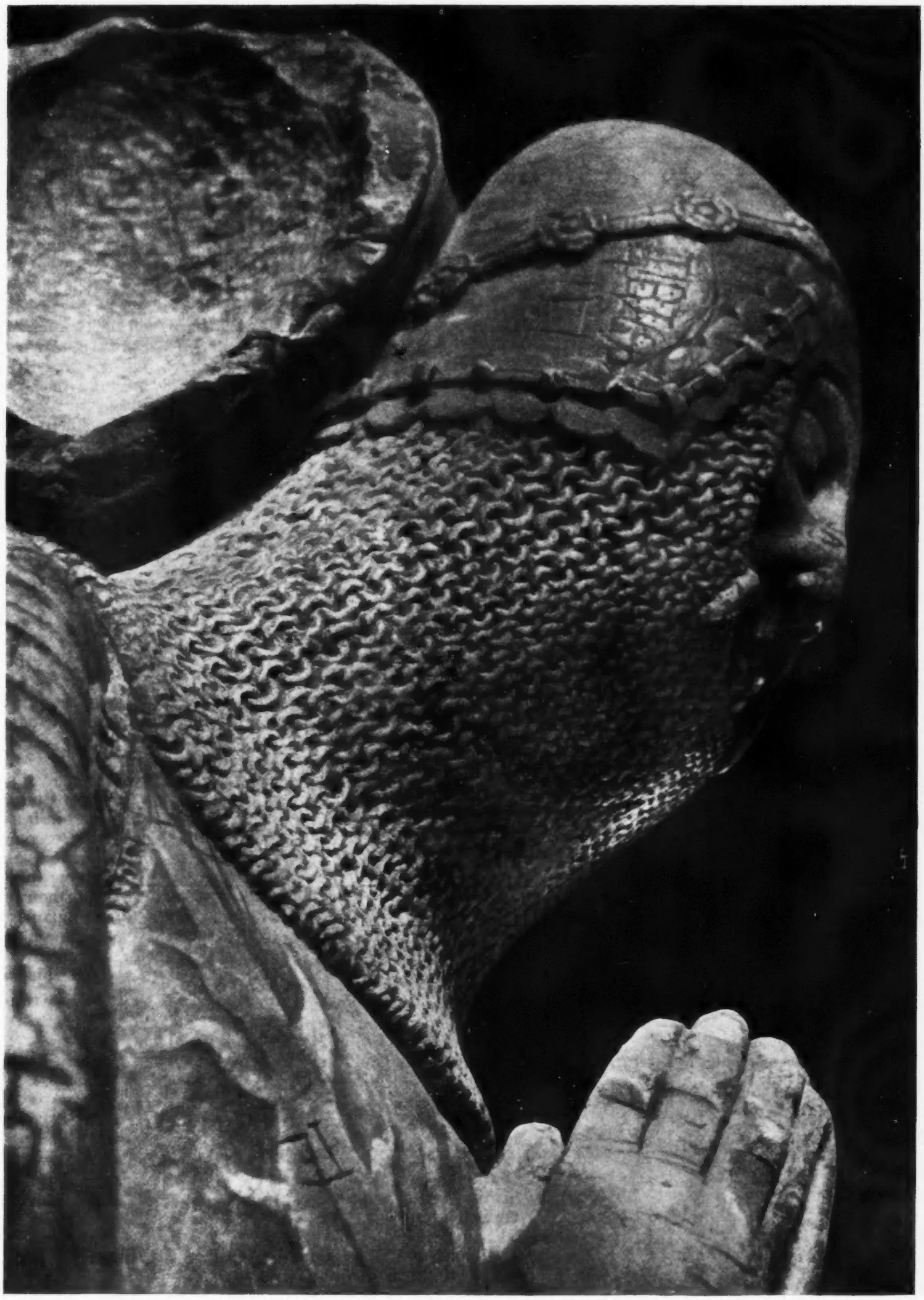
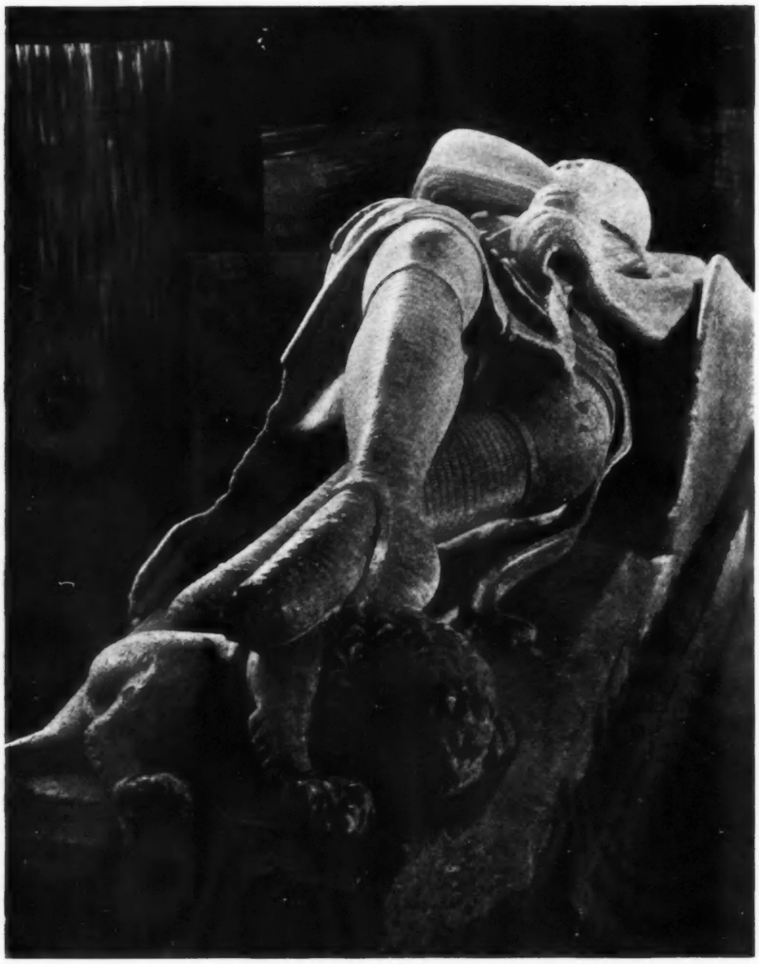
* *English Church Monuments, A.D. 1150-1550: An Introduction to the Study of Tombs and Effigies of the Mediæval Period.* By Fred. H. Crossley (reviewed in our issue for Aug. 10).



The head of an alabaster monument to a Segrave Knight; from Dorchester Abbey, Oxfordshire, c. 1400.



Another aspect of the Knight from Dorchester Abbey, illustrated on page 264, showing the "tense lion at his feet" described below.

shoes nailed outside, ignores the great tomb-sculpture within.

WE are told nothing, shown nothing, and our past sculptural greatness is buried and neglected and unprotected. Each year more names are cut on the shield, thigh and shoulder; feet are broken, loose parts thrown away.

May I add three more photographs to those that were shown with your review? The first two are of the Dorchester knight from a different view-point from that in your issue for August 10, and I think give us more of his disturbing presence. Is he Christian or Pagan?

He is an explosion of immediate purpose and will. Though recumbent, he is leaping into battle. Puritans have crushed his nose, and merely increased the compact pugnacity of his bullet-head. According to books, he is a "sword-drawing, cross-legged, dancing knight," one might add "shouting." The strain and heave runs right through from head to feet, and is echoed in the tense lion at his feet. He is intensely a person, though 400 years ago it was recorded: "His name is there oute of remembrance."

To a sculpture student this figure is probably baffling. The power of the planes, masses, direction and rhythm, may affect him; he can respond to the robust form and its rich outline; but analysis is difficult, because here creation has happened in true British fashion, much more by spirit than by formula or proved knowledge.

Beside him is an alabaster monument to a Segrave, all serenity, peace and stillness. Thank heaven it is quite impossible to cut any letters, dates, etc., on the links of chain-mail; so here we have a superb cylindrical form, just revealing the encased jaw and decorated with how many hundred links? Each small circle is perfect and exact and logical in its meeting with the next, and all work together—tight, loose, open, closed, as parts of the whole, wave after wave—a feat of craftsmanship unsurpassed in any age or country, by a man who might have visited France once or twice, but knew nothing of India, Egypt, China, Mexico.

Now, about your American reviewer's blind spot: he only talks of a moribund or finished England. Does he not see that this is the age of rebirth?

Thirty years ago, no English sculptor used a hammer and chisel. Today, half of them do. The young sculptors and sculptresses have gained knowledge of a score of stones, marbles and granites and often made their own tools to deal with the various natures of these stones; hard, soft, brittle, treacherous. The students have returned to the mason's yard, and are reviving stone-cutting, simply because they see it as the right thing that must be done. Moreover, this achievement has been entirely out of themselves. From A.D. 1000–1500 Church and State said to masons and carvers: "Do this! We want it." They make little such demand now. It is to the private citizen and the enthusiastic architect that credit will be given if sculpture in Great Britain flowers for the fourth time.

ERIC KENNINGTON

Slum

SIR,—It appears from the small number of slum clearance schemes so far submitted to the Minister of Health by local authorities that the Minister's five-year plan is to become yet another of those schemes that stop short at the theoretical stage. I read in last week's issue of the Journal that 200 authorities claim that no slums exist in their districts: surely this cannot be true.

An impartial survey of housing conditions in every city in England (similar to those you have been publishing), is necessary before a scheme of slum clearance becomes practicable.

RATEPAYER

Municipal Offices for Kingston

The scheme promoted by the Kingston Corporation for the building of new municipal offices and courts at a cost of about £130,000 has been approved by the Ministry of Health, but the inclusion of a fire station is to be deferred.

THE INSTITUTE OF REGISTERED ARCHITECTS

We have received the following letter from the Registrar of the new Institute of Registered Architects.

SIR,—With reference to the questionnaire sent out by you to various architects, this appears to be premature and in any case is manifestly unfair to the Institute of Registered Architects, as it was issued before publication of the President's letter replying to the new Institute's critics. The first batch of replies (published in your issue for August 24) would appear, generally, to prejudge an issue and to show utter misapprehension as to the I.R.A.'s objects. The President in his manifesto clearly stated the new Institute was complementary to and not competitive with other bodies.

J. M. ALINGTON, M.A. (OXON),
Registrar, The Institute of Registered Architects.

We do not agree with the Registrar that our questionnaire was either premature or unfair. The views of the architectural profession as to the desirability or superfluity of the new Institute announced in Sir Edwin Lutyens's original manifesto are of vital importance—since it is the benefit of the architectural profession that the new Institute puts forward as its purpose, and Sir Edwin Lutyens's second manifesto (which forms the subject of this week's leading article) cannot affect the questions involved.

The architects to whom we sent the questionnaire were not selected architects, but representative architects chosen without discrimination as to whether they were members of the R.I.B.A. or of the I.A.A.S.

Below we print our questionnaire for the second time, together with further replies that we have received.

1: Do you consider that the formation of the Institute of Registered Architects is of value to the profession ?

2: Why?

3: Do you consider that it will adversely affect any other recognized architectural institutions ?

4: Do you think that the work which the Institute of Registered Architects proposes to do as set out in its manifesto could be equally well done by existing bodies (i.e., R.I.B.A., I.A.A.S., the Registration Council, etc.) ?

L. H. SHATTOCK, A.R.I.B.A.

1 : I do not consider the formation of the Institute of Registered Architects would be of any value to the profession.

2 : Because its formation would only confuse the public's idea of what the R.I.B.A. has been trying to do to bring about co-ordination.

3 : It would adversely affect any other recognized architectural institutions as it would add to their number instead of decreasing them.

4 : The work which the Institute of Registered Architects proposes to do could be equally and better done by the R.I.B.A.

GEORGE P. BATH, F.I.A.A.S.

1 : Yes.

2 : For the simple reason that the Institute of Registered Architects proposes to try and educate the general public that the services of a qualified architect are necessary in building work.

3 : Not so long as it confines its activity to the work set out in the manifesto.

4 : No, as I take it my answer to No. 2 will be done by advertisement and the existing bodies have a rooted objection to advertisement.

NORMAN CULLEY, F.R.I.B.A.

1 : To the profession, no.

2 : Because the R.I.B.A. and its Allied Societies with a considerable existing organization unselfishly serve the best interests of the whole profession.

3 : No, and certainly not the R.I.B.A. After this year the R.I.B.A. Examination gives the qualification for a registered architect, then why another Society ?

4 : The R.I.B.A. quite unselfishly has in the past, and doubtless will in the future, continue to uphold the whole profession of architecture, and there is nothing new to the R.I.B.A. in the "primary aims" of the proposed new Society.

G. S. BIGGS

1 : Yes.

2 : The formation of this Institute is the logical outcome of the Registration of Architects since the existing Registration Council appears to be ineffective in the protection of the interests and unification of the profession. It does not confer upon the admitted architect a designatory affix likely to convey to the public an impression of qualification comparable with that of other professional institutions.

3 : Yes. These must of necessity become redundant if the proposed Institute progresses as a unifying organization as should be its object. At present a competent architect may be admitted, by almost identical tests, to membership of four architectural bodies, each practically duplicating the others' functions. Presumably he may also, if he chooses, impress or bewilder the layman by a display of his multitudinous architectural "hall-marks."

4 : The work could be done, but not equally well, by the existing bodies because their efforts must be several, and procedure and results would thereby be retarded.

In short, I believe that if Registration has been thought sufficiently desirable of attainment, it must be made to become an effective force in itself by its evolution into an embracing Institute.

J. MURRAY EASTON, F.R.I.B.A.

1 : No.

2 and 3 : Really, straight answers to these questions can only be had *viva voce.*

4 : Yes.

G. A. JELLICOE, A.R.I.B.A., A.I.L.A.

1 : No.

2 : Instinct.

3 and 4 : To a simple-minded architect—too abstruse.

HERBERT KENCHINGTON, F.R.I.B.A.

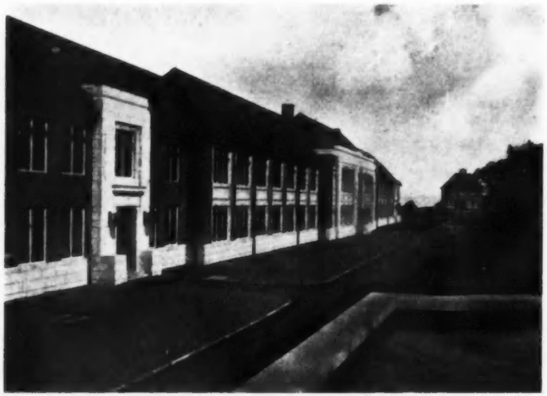
1 : No.

2 : It introduces an element of rivalry, when what is needed most is the strength arising from unity.

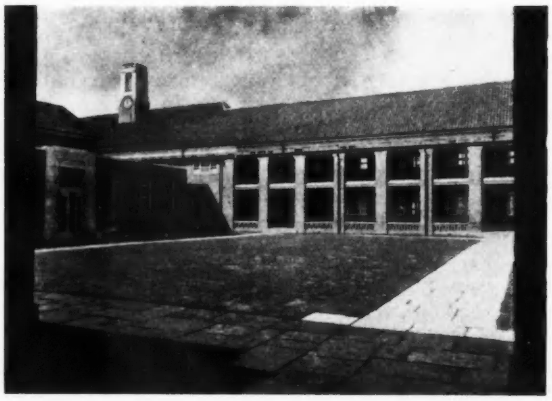
3 : Not as institutions. But in the public ear, one strong voice is more telling than a chorus—especially when discordant.

4 : Yes. Lest the points mentioned in the manifesto are not given due prominence by the existing bodies, I suggest a joint committee, appointed by them and representative of all interests, to deal with these matters in all their bearings, but acting through the parent bodies. Divisions and rivalry would be avoided and greater unity (for which the R.I.B.A. has sacrificed so much) would be gradually built up.

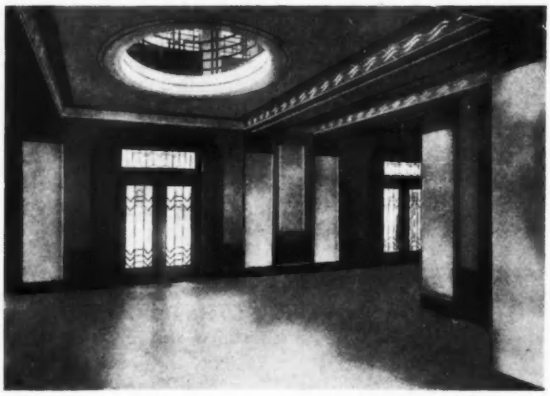
HIGH STORRS SCHOOL, SHEFFIELD



The Front Elevation



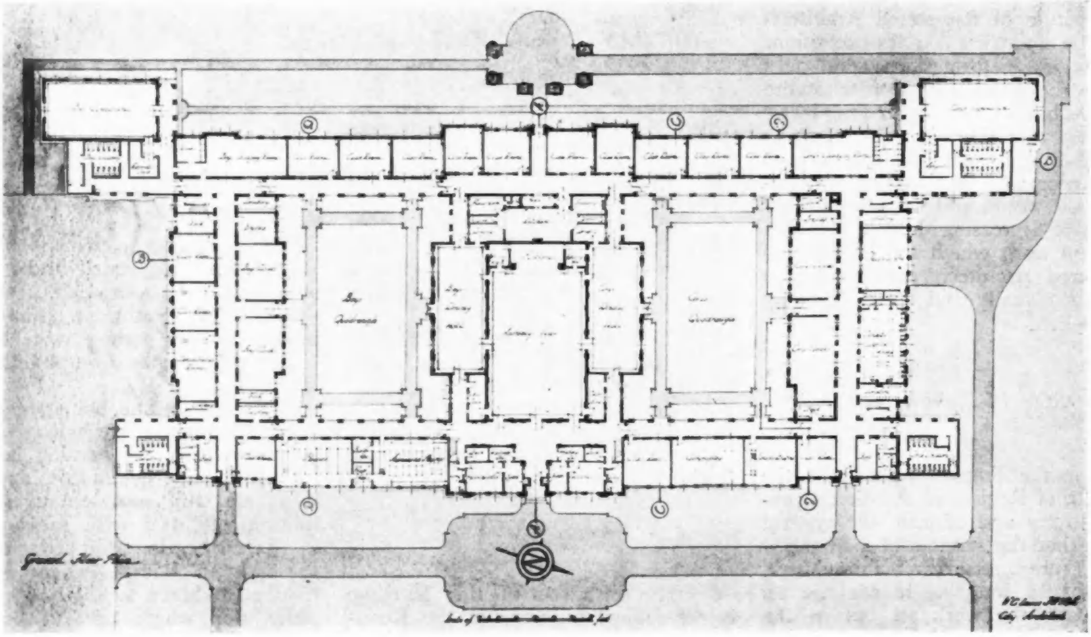
One of the Quadrangles



The Entrance Hall

The Central Secondary School for boys and girls at High Storrs, Sheffield, designed by the Sheffield city architect, stands at an altitude of 750 feet, with a view of the Derbyshire moors. The class-rooms generally face south and west, and the special rooms and laboratories east and north. The buildings accommodate 670 boys and 640 girls. There are 39 class-rooms, together with assembly hall, lecture rooms, laboratories, gymnasia, etc. The boys' school and the girls' school each has its own quadrangle and its own dining room, served by a common kitchen.

The buildings are faced with rustic brickwork pointed in white mortar, with artificial stone dressings. The roof is of sand-faced pantiles. The assembly hall (which seats about 750 persons and has a stage and retiring rooms) is panelled in walnut. The floors throughout are laid with hard-wood blocks. The contract price was £95,053. This figure, which includes the cost of the caretaker's house, is equivalent to £72 10s. per scholar place.



DESIGNED BY W. G. DAVIES

LITERATURE

ARCHITECTURAL PRACTICE

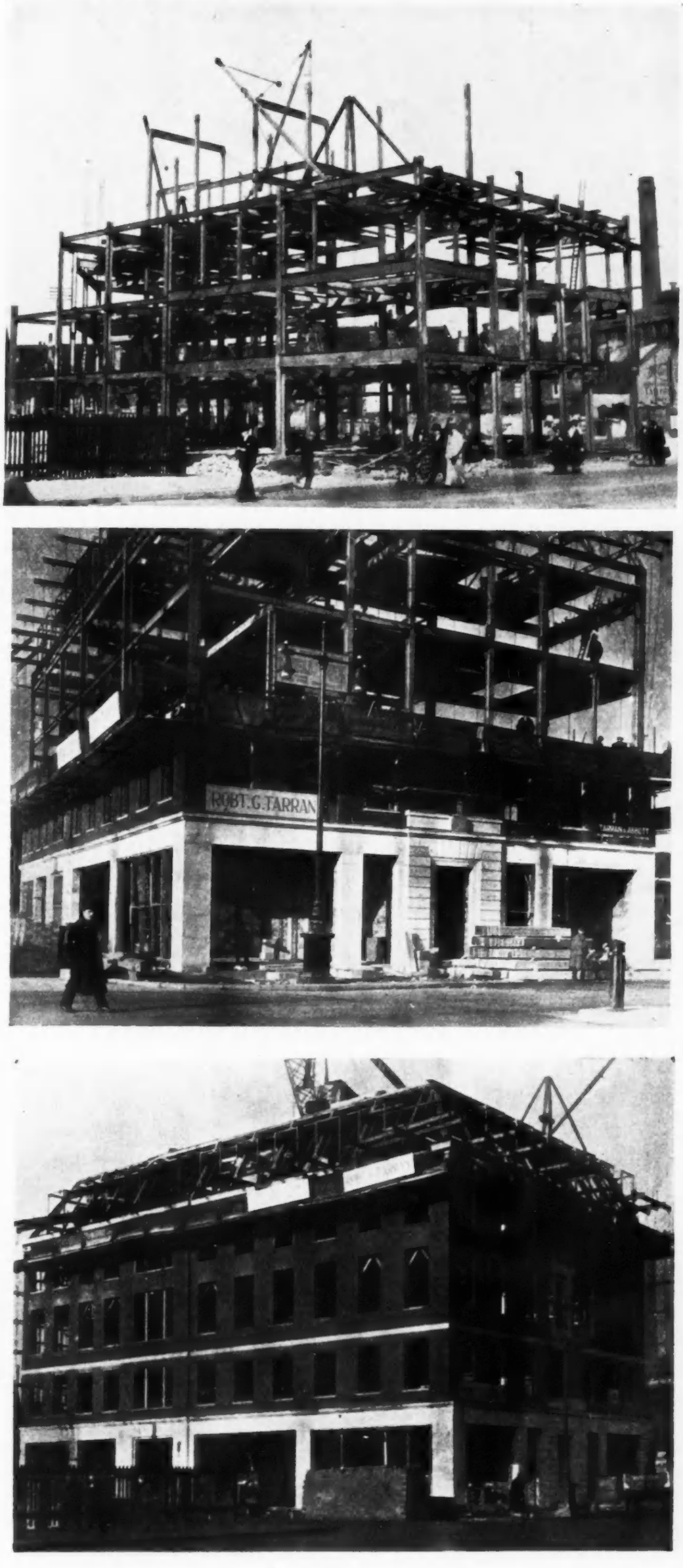
Architectural Practice and Administration. By H Ingham Ashworth. B.A., A.R.I.B.A. London : Sir Isaac Pitman and Sons. Price 12s. 6d. net.

THE three photographs on this page are progress photographs taken at various stages in the erection of a building at Hull, working drawings of which are reproduced on the pages following. The photographs and drawings are taken from Mr. Ashworth's book, where they are given to illustrate respectively the value of such photographs as a substitute (where the job is some distance away) for frequent inspection and as evidence in case of dispute, and the amount and nature of information to be included on key drawings made to ¼ in. scale—the scale the author recommends for the key drawings for a building of this kind.

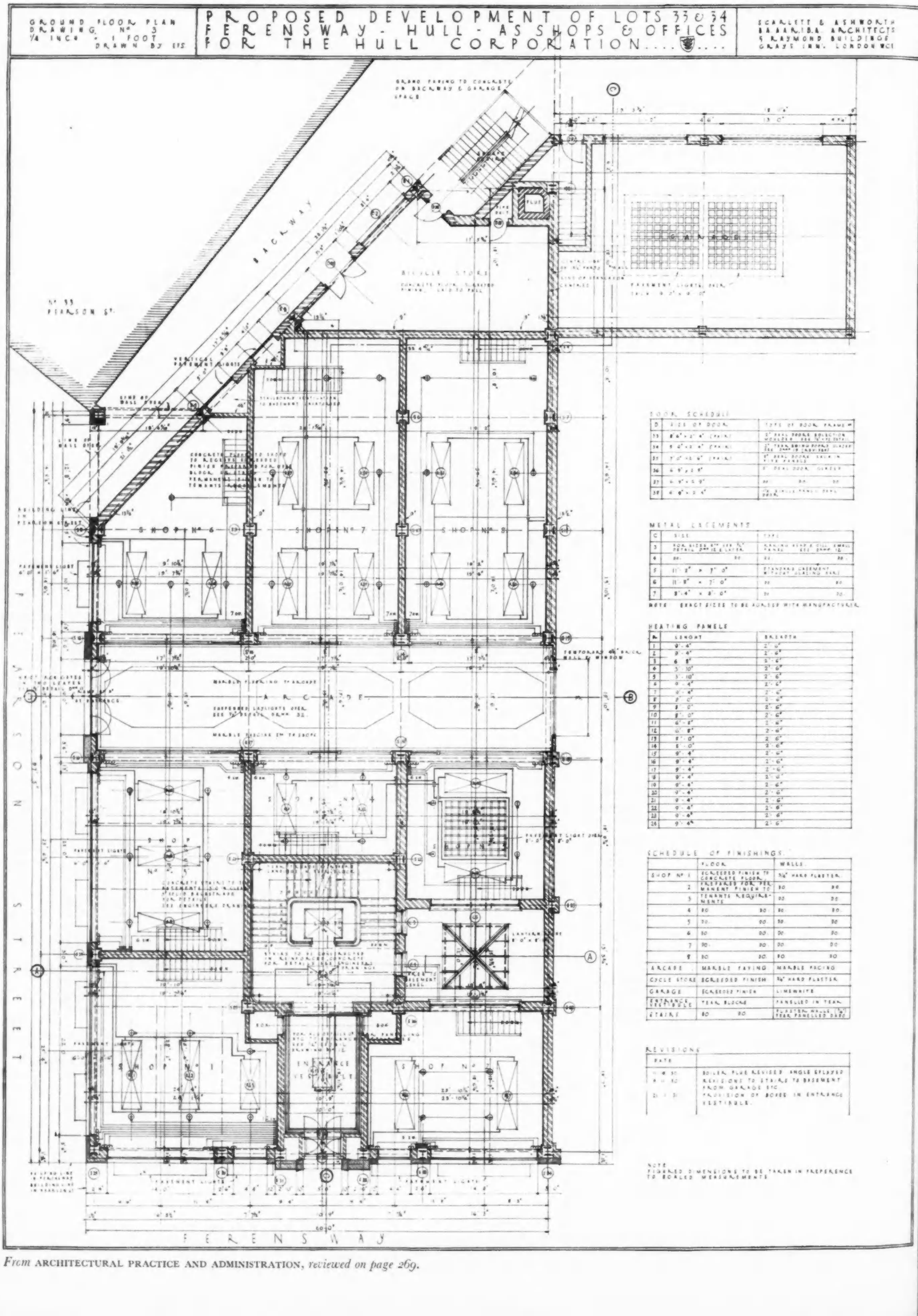
The author also recommends that tabulated lists of door and window sizes and floor finishings should be placed on these drawings, as in the examples here reproduced.

The purpose of the book is not, the preface explains, to " compete with other well-known works on Professional Practice in general, but rather that it should deal more fully with the actual carrying out of a large building contract with all its attendant worries and difficulties. The writer, being an architect, wishes to describe the whole matter from the architect's point of view, and thus endeavour to assist the young practising architect and also the student in what will be a very exciting and at the same time trying affair—namely, the first large contract."

The book is fully illustrated with idealized working drawings and sketches and helpful diagrams and charts to suggest convenient ways of recording and filing business operations, and model letters and forms of tender and certificate. It is divided into chapters describing the architect's relations with the client, the engineer, the quantity surveyor, the specialist and the contractor, and is full of advice based on the findings of the author in practice.



Progress photographs of a building in Hull. Designed by Scarlett and Ashworth. See drawings overleaf.


GROUND FLOOR PLAN
DRAWING Nº 3
¼ INCH = 1 FOOT
DRAWN BY SIS
PROPOSED DEVELOPMENT OF LOTS 33 & 34 FERENSWAY - HULL - AS SHOPS & OFFICES FOR THE HULL CORPORATION....
SCARLETT & ASHWORTH
BA.A.R.I.B.A. ARCHITECTS
5 RAYMOND BUILDINGS
GRAYS INN. LONDON WC1
BACKWAY
BICYCLE STORE
GARAGE
Nº 33 PEARSON Sᵀ
SHOP Nº 6
SHOP Nº 7
SHOP Nº 8
ARCADE
SHOP Nº 5
SHOP Nº 4
SHOP Nº 3
SHOP Nº 1
SHOP Nº 2
ENTRANCE VESTIBULE
PEARSON STREET
FERENSWAY
A
B
C

DOOR SCHEDULE

D	SIZE OF DOOR	TYPE OF DOOR, FRAME ETC
33	8' 6" × 2' 4" (PAIR)	2" DEAL DOORS BOLECTION MOULDED SEE ½" F.S. DETAIL
34	9' 6" × 2' 4" (PAIR)	2" TEAK SWING DOORS GLAZED SEE DWG 19 (REVISED)
35	7' 0" × 2' 6" (PAIR)	2" DEAL DOORS LAID IN FIVE PANELS
36	6' 9" × 2' 9"	2" DEAL DOOR GLAZED
37	6' 9" × 2' 9"	DO DO DO
38	6' 8" × 2' 4"	1½" SINGLE PANEL DEAL DOOR.

METAL CASEMENTS

C	SIZE	TYPE
3	FOR SIZES ETC SEE ½" DETAIL DWG 12 & LATER	RAKING HEAD & CILL SMALL PANES SEE DWG 12
4	DO DO	DO DO
5	11' 8" × 7' 0"	STANDARD CASEMENT WITHOUT GLAZING BARS
6	11' 8" × 7' 0"	DO DO
7	8'-4" × 8'-0"	DO DO

NOTE EXACT SIZES TO BE AGREED WITH MANUFACTURER.

HEATING PANELS

P	LENGHT	BREADTH
1	9'-4"	2'-6"
2	9'-4"	2'-6"
3	6' 8"	2'-6"
4	5'-10"	2'-6"
5	5'-10"	2'-6"
6	9'-4"	2'-6"
7	9'-4"	2'-6"
8	8'-0"	2'-6"
9	8'-0"	2'-6"
10	8'-0"	2'-6"
11	6'-8"	2'-6"
12	6'-8"	2'-6"
13	8'-0"	2' 6"
14	8'-0"	2'-6"
15	9'-4"	2'-6"
16	9'-4"	2'-6"
17	9'-4"	2'-6"
18	9'-4"	2'-6"
19	9'-4"	2'-6"
20	9'-4"	2'-6"
21	9'-4"	2'-6"
22	9'-4"	2'-6"
23	9'-4"	2'-6"
24	9'-4"	2'-6"

SCHEDULE OF FINISHINGS.

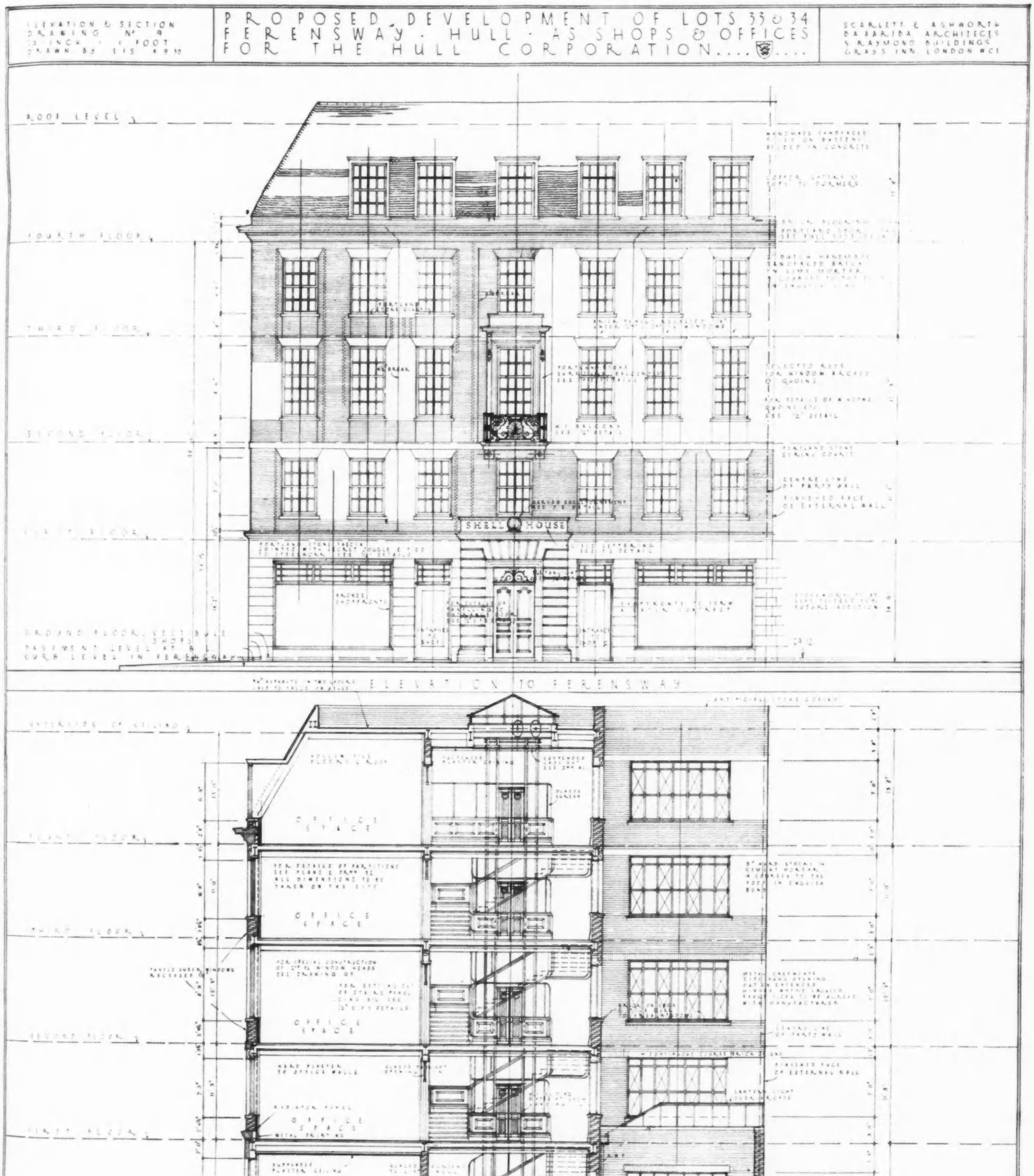
	FLOOR	WALLS.
SHOP Nº 1	SCREEDED FINISH TO CONCRETE FLOOR	¾" HARD PLASTER.
2	PREPARED FOR PERMANENT FINISH TO	DO DO
3	TENANTS REQUIREMENTS	DO DO
4	DO DO	DO DO
5	DO DO	DO DO
6	DO DO	DO DO
7	DO DO	DO DO
8	DO DO	DO DO
ARCADE	MARBLE PAVING	MARBLE FACING
CYCLE STORE	SCREEDED FINISH	¾" HARD PLASTER
GARAGE	SCREEDED FINISH	LIMEWHITE
ENTRANCE VESTIBULE	TEAK BLOCKS	PANELLED IN TEAK
STAIRS	DO DO	PLASTER WALLS (¾") TEAK PANELLED DADO

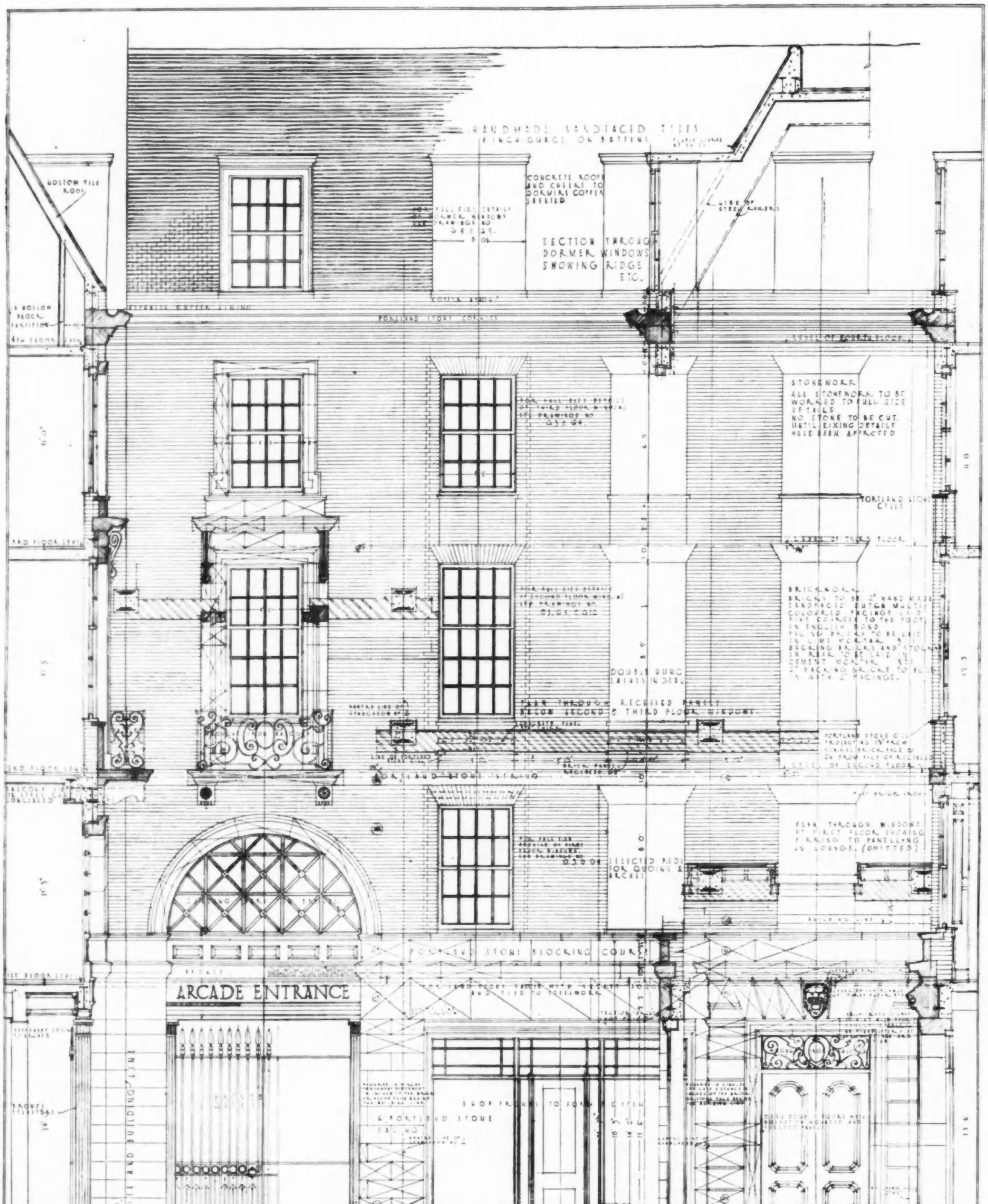
REVISIONS

DATE	
11 · 8 · 30	BOILER FLUE REVISED ANGLE SPLAYED
8 · 11 · 30	REVISIONS TO STAIRS TO BASEMENT FROM GARAGE ETC
21 · 1 · 31	PROVISION OF BOXES IN ENTRANCE VESTIBULE.

NOTE
FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED MEASUREMENTS

From ARCHITECTURAL PRACTICE AND ADMINISTRATION, *reviewed on page 269.*


ELEVATION & SECTION
DRAWING Nº 9
½ INCH = 1 FOOT
DRAWN BY SFS 4.9.30
PROPOSED DEVELOPMENT OF LOTS 33 & 34
FERENSWAY · HULL · AS SHOPS & OFFICES
FOR THE HULL CORPORATION....
SCARLETT & ASHWORTH
FF. A.R.I.B.A. ARCHITECTS
5 RAYMOND BUILDINGS
GRAYS INN. LONDON WC1
ROOF LEVEL
FOURTH FLOOR
THIRD FLOOR
SECOND FLOOR
FIRST FLOOR
GROUND FLOOR
SHELL HOUSE
ELEVATION TO FERENSWAY
OFFICE SPACE
OFFICE SPACE
OFFICE SPACE
OFFICE SPACE
OFFICE SPACE
GROUND FLOOR DATUM
BASEMENT
SHOP Nº 4
STORAGE
SECTION A.A


HANDMADE SANDFACED TILES
HOLLOW TILE ROOF
CONCRETE ROOF AND CHEEKS TO DORMERS
SECTION THROUGH DORMER WINDOWS SHOWING RIDGE ETC.
PORTLAND STONE CORNICE
STONEWORK
ALL STONEWORK TO BE WORKED TO FULL SIZE DETAILS
NO STONE TO BE CUT UNTIL FIXING DETAILS HAVE BEEN APPROVED
BRICKWORK
DOUBLE HUNG SASHES IN DEAL
PLAN THROUGH RECESSED PANELS BELOW SECOND & THIRD FLOOR WINDOWS
PORTLAND STONE STRING
SELECTED REDS FOR QUOINS & ARCHES
PLAN THROUGH WINDOWS AT FIRST FLOOR SHOWING FINISH TO PANELLING IN LOUNGE (OMITTED)
PORTLAND STONE BLOCKING COURSE
ARCADE ENTRANCE
BRONZE
SHOP FRONTS TO SHOP FITTER
PORTLAND STONE
PLAN OF ENTRANCE
BRONZE PILASTERS
PLAN OF DOORWAY
DRAWING No.
NEW STREET HULL LOTS 42 & 43 HALF INCH DETAIL

From ARCHITECTURAL PRACTICE AND ADMINISTRATION, *reviewed on page 269.*

AN EMPIRE TIMBER

WESTERN RED CEDAR

[BY LOREN L. BROWN]
British Columbia Lumber Commissioner

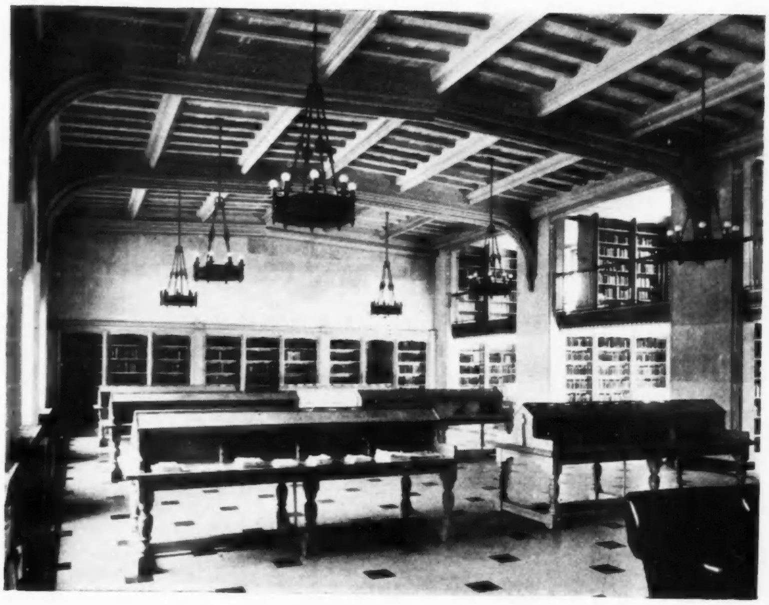
CEDAR was one of the first woods known to and used by primitive man, but unlike most of his adaptations to his simple purposes, its use has survived the onslaughts of civilization. Cedar of Lebanon was used in King Solomon's temple. A species of cedar was found in Tutankhamen's tomb. The Romans used cedar extensively, and to them it was *arbor vitæ*—the tree of life. In British Columbia, where stands of red cedar are as extensive as the well-known Columbian pine, the Indians used it for their canoes and lodges, and, because of its durability, for their totem poles, long before the coming of the white man. In modern times it has been extensively used where light weight, durability and resistance to damp and decay have been required.

The trees grow to a great size, a diameter of 10 ft. being common, so that it is possible to obtain sawn timber in large sizes, free from defects. It is not a hardwood and should not be used in places where it will be liable to abrasion; but, because of its resistance to damp, it is ideal for garden shelters and glass houses; because of its content of aromatic natural oils, making it repellent to insects and vermin of all kinds, it is invaluable on the farm; and it is particularly useful in interior finishing owing to its lightness, ease of working, and freedom from any tendency to warp or twist. It is also greatly used in America for roofing, nearly ninety per cent. of all houses in Canada and the United States being roofed with red cedar shingles or tiles.

These shingles are of various lengths, the most popular being 16 inches long, and as they are laid overlapping with only one-third of their length exposed to the weather, there is a triple layer of shingles over the entire roof area, providing excellent insulation. For wall surfaces one-half of the shingle is exposed. All shingles are rift-sawn, and there is therefore no tendency to warp or twist, and in cases where they have been used in England they have proved suitable to the English climate.

In the report on Western Red Cedar, recently issued by the Forest Products Research Laboratories at Princes Risborough, following tests extending over a period of eight months, which confirms tests made by the Forest Products Laboratories of both Canada and the United States, the use of this wood is recommended in situations where there is any risk of the timber becoming damp and thus liable to the attack of dry rot.

The Forest Products Research Laboratories found that, after eight months' exposure to fungus attack in special culture flasks, designed so that the timber could be kept constantly moist, the test blocks of Western Red Cedar were absolutely undecayed and showed no traces of fungus growth, nor had they lost any weight. In a further test of the resistance of this timber to dry rot, Western Red Cedar boards were laid between boards already infected with *merulius lacrymans* and the whole covered with glass. When the floor was examined at the end of six months, no traces of the fungus were to be seen on the test boards, which had remained quite sound.



The upper photograph shows Western Red Cedar used for panelling in the dining-room of a bank building in Toronto, Canada.

The lower one shows a ceiling of Western Red Cedar in the reading room of Hart House, University of Toronto.

Both buildings were designed by Sproat and Rolph.

QUESTIONS THAT ARISE

Cottages in Sussex

¶ S. D. G. writes: "*I am the owner of some cottages in Sussex, and the local Sanitary Inspector has sent a list of repairs that he considers necessary. The list is a rather heavy one and the rents are small and cannot be increased. Can I refuse to have the work done and let the cottages be condemned? Then, if the tenants left, I could have them thoroughly put into good condition and the rents could be increased considerably. The cottages are in a lovely position on high ground close to the sea. The present tenants do well by letting, although I only get 8s. 6d. per week gross per cottage. I shall be glad of your expert's advice as to my legal position.*"

It is rather difficult to advise clearly on this point because, first, I do not know precisely under what Act, or authority, the notice in question has been served, and secondly, I do not know just how bad a state the property is in. It is conceivable that the notice has been served under the provisions of some local Act which pertains to the district in which the cottages are situate.

It is probable, however, that the notice issued by the Sanitary Inspector has been served under Section 17 of the Housing Act, 1930, or some very similar provision. This section requires the works specified in the notice to be carried out within reasonable time, not less than 21 days. The section, of course, also states upon whom the notice must be served, the following section (that is, 18) deals with the enforcement of this notice. It provides that if the repairs are not carried out as provided by the Act, the local authority have certain powers—that is, they may do the work themselves (sub-section i) and to recover the expenses from the owner, or take proceedings under sub-section iii.

To ignore the notice would be very unwise. The local authority would insist upon the owner doing the work, or proceeding under their powers to see that it were done in some other way. Further, if a notice such as the one you mentioned has been served, it is presumable that the property is not really in a state bad enough for it to be condemned, or otherwise the local authority would have served a demolition or such-like notice or order in the first place, instead of a "repair" one.

For these reasons I am of opinion that the scheme suggested by your correspondent is impracticable.

E. F. I.

Heat Expansion of Concrete Roofs

¶ E. W. writes: "*May I refer you to questions and answers published by the Building Research Station, July 22, 1933 (2nd series No. 3), item No. 28, Heat Expansion of Concrete Roofs. I should be glad of some detailed information as to expansion joints referred to on page 7 of this pamphlet.*"

It seems likely that B.R.S. would be able to supply details of the joint recommended by them and would do so on application. The only simple form of joint which occurs to me as adaptable with safety would be one involving an overlap and change of level, very much as in the case of the "drips" on a lead flat. Such a form would allow freedom for expansion and sliding without pushing out parapet walls and similar consequences, but would involve a suspended ceiling beneath unless visible variation in level was unobjectionable.

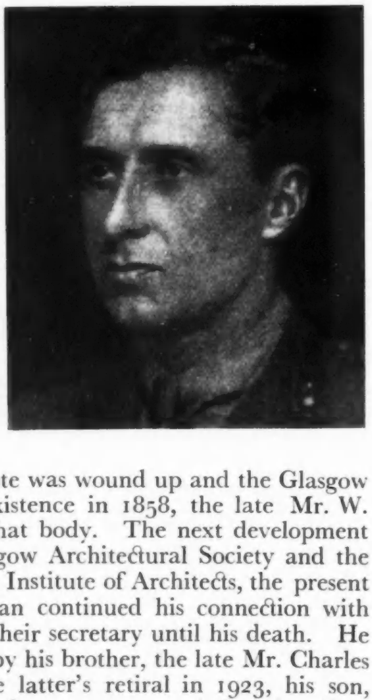
E. G.

OUR SECRETARIES

• 11 •

WILLIAM MACLEAN

GLASGOW INSTITUTE OF ARCHITECTS



MR. WILLIAM MACLEAN is a solicitor, and has acted as Secretary of the Glasgow Institute of Architects, a Chapter of the Royal Incorporation of Architects in Scotland, since November, 1923. There has been a long connection between Mr. MacLean's family and the architects of Glasgow. His late uncle, Mr. W. MacLean, a well-known Glasgow solicitor, became Secretary in the middle of last century, of what was the original architectural body in Scotland, known as the Architectural Institute of Scotland. This body functioned also in Edinburgh. So far as Glasgow was concerned, this Institute was wound up and the Glasgow Architectural Society came into existence in 1858, the late Mr. W. MacLean becoming Secretary of that body. The next development was the disappearance of the Glasgow Architectural Society and the formation, in 1868, of the Glasgow Institute of Architects, the present body. The late Mr. W. MacLean continued his connection with architectural matters and acted as their secretary until his death. He was succeeded in the secretaryship by his brother, the late Mr. Charles J. MacLean, solicitor, and on the latter's retiral in 1923, his son, Mr. William MacLean, the present Secretary, succeeded to the office.

LAW REPORT

PREMISES TO BE USED AS PRIVATE DWELLING HOUSE ONLY

Farbstein v. *Speed.—Chancery Division. Before Mr. Justice Luxmoore.*

THIS action concerned the right of the defendant, Mrs. E. M. Speed, to use No. 47 Evering Road, Stoke Newington, for purposes other than as a private dwelling house only.

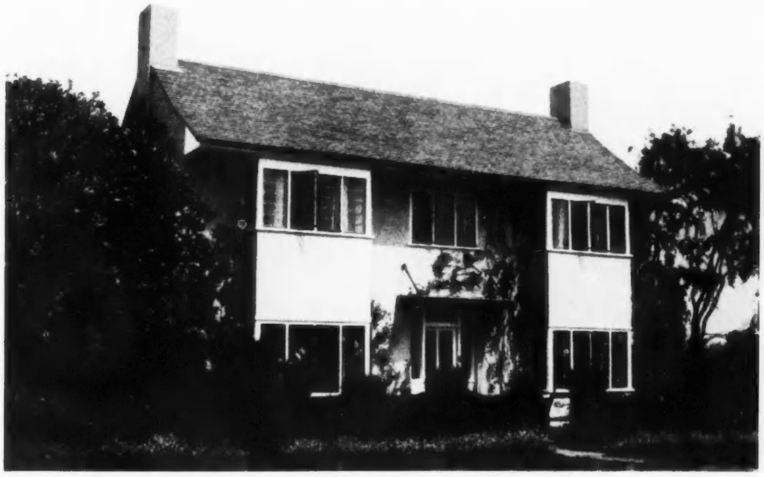
The plaintiff, Mr. Farbstein, held premises on a lease from the Clothworkers Company. The lease contained a covenant to use the premises as a private dwelling house only. Defendant became tenant of the house and had used it in connection with a dentist's business. The lessors had refused to grant the defendant permission to use the premises for dentistry and plaintiff now sued for possession on the ground of breach of agreement.

Mr. Burgess, for the defendant, contended that there had been a waiver by the plaintiff, of the covenant in question, and submitted that there was an implied licence to continue the business at the premises.

His lordship made an order for possession of the premises and gave the plaintiff the costs of the action.

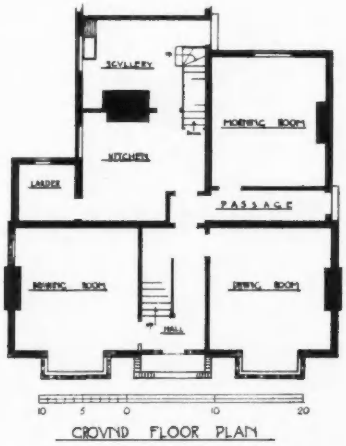
In his judgment his lordship pointed out that the defendant by her agreement covenanted to keep the premises as a private house only, but a dentist's business had been carried on at the house and defendant had relied upon a waiver by the plaintiff, contending that it was of such a nature as to amount to a licence to defendant to carry on business at the house. It was true that plaintiff had told defendant to interview the Clothworkers Company and said if they did not object to the business he would not; but that could not be said to be a waiver in any sense whatever. There was nothing here which amounted to an implied licence to continue the business, and there would be judgment for the plaintiff.

A HOUSE IN HUNTINGDON



The small photograph below shows the house as it was before alteration. The existing brickwork on the front elevation was not disturbed except for cutting out openings for the new bays and for the small window in the drawing-room. The roof was partly demolished and a new roof constructed over, giving a suitable pitch for the grey tiles which were used in place of the purple slates. An oak hood, in place of the existing porch, was fixed over the door.

The whole of the brickwork is coloured a light cream, the woodwork is painted white and all metal work black. The total expenditure was £257 15s. 4d.



RE-MODELLED BY WILLIAM A. LEA

SOCIETIES AND SCHOOLS

THE WELSH SCHOOL OF ARCHITECTURE

The new term at the Welsh School of Architecture begins on October 2. The School, which for the last six years has been granted the status of Final Recognition, is accommodated in the new wing of the Technical College, Cathays Park, Cardiff. Owing to the comparatively modest size of the School (last session there were about 40 full-time students, averaging 8 per year) careful attention can be paid to the special needs of each student, and its aim is to encourage all-round development by means of a well-balanced curriculum.

At the Technical College, Cardiff, ten scholarships, covering tuition fees and maintenance grants of £40 per annum for three years, are offered for competition annually. Candidates for entry to the Welsh School of Architecture are eligible to compete for these Scholarships. The examination is a competitive one and is of about the same standard as matriculation.

The Welsh School of Architecture has now been at work for rather more than thirteen years under the charge of Mr. W. S. Purchon, M.A., A.R.I.B.A., the Lecturer in Architecture being Mr. Lewis John, M.A., B.ARCH., A.R.I.B.A., and the Assistant Lecturer, Mr. A. MacLean, B.A., A.R.I.B.A. Prominent local architects assist in the work of the advanced course as honorary lecturers. Students in the Department also attend courses of instruction in the Departments of Engineering, Technical Chemistry, Mathematics, Physics and the School of Art.

The three-years full-time day course leads to the award of the Certificate, to the holders of which the R.I.B.A. grants exemption from its Intermediate Examination, while those students who successfully pass through the Diploma Course are exempted from the R.I.B.A. Final Examination, a special course of lectures on Professional Practice and a special examination in this subject being held in the School. Success in this examination also forms a complete qualification for Registration under the Architects' Registration Act of 1931. This Diploma Course follows the Certificate Course and consists of two sessions, the former of these being of six months' duration only, the intervening six months being spent in architects' offices.

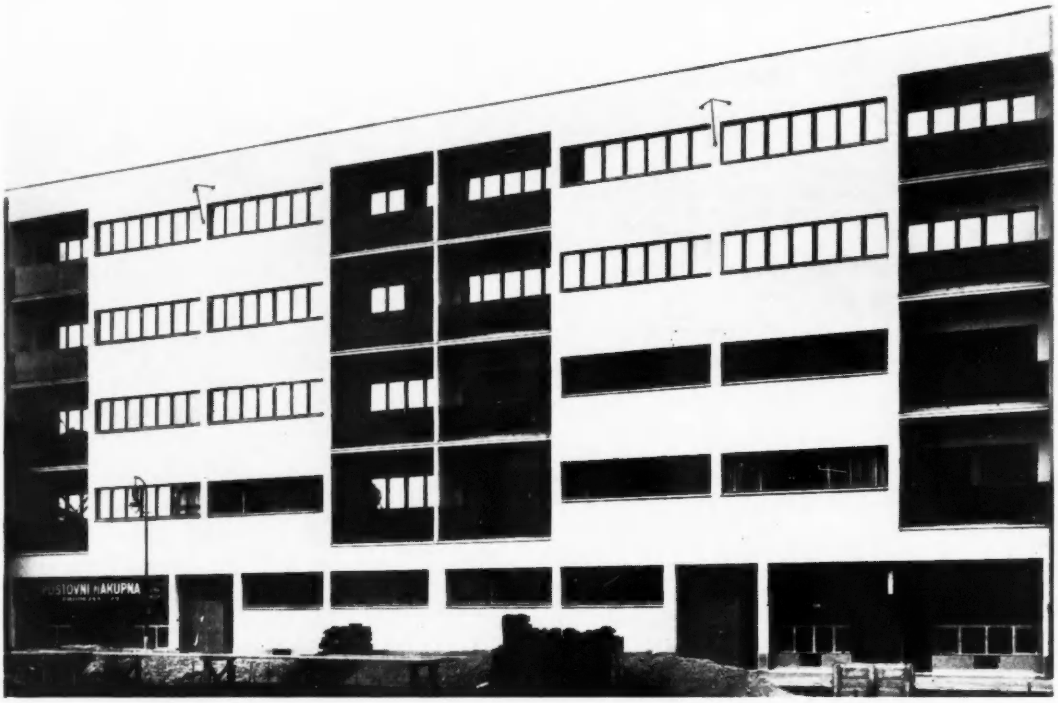
There is also an evening atelier for architects' assistants who cannot attend the day courses.

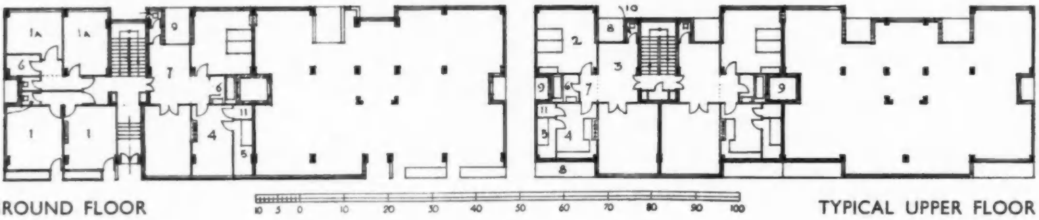
The Department is in close touch with the South Wales Institute of Architects, representatives of this body being on the Advisory Committee of the School, and students of the School are eligible for the prizes awarded by the Institute. In addition to these awards, there are a number of school prizes presented in the main by local architects.

The external examiners are Professor L. B. Budden, of the University of Liverpool, and Professor A. C. Dickie, of the University of Manchester.

Candidates for the various Scholarship Examinations should obtain application forms which must be completed and submitted by September 16.

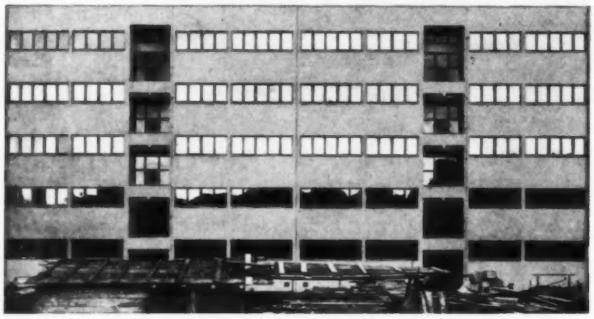
FLATS IN PRAGUE





GROUND FLOOR TYPICAL UPPER FLOOR

Key to the accommodation : 1 = shop ; 1a = living-room ; 2 = bedroom ; 3 = entrance hall ; 4 = kitchen ; 5 = servant's bed-sitting room ; 6 = bathroom and lavatory ; 7 = lobby and sliding door ; 8 = balconies ; 9 = areas ; 10 = w.c. ; 11 = larder.



This block of flats at Pankrác, a newly developed quarter of Prague, was designed to provide adequate but economic accommodation for people of the professional class.

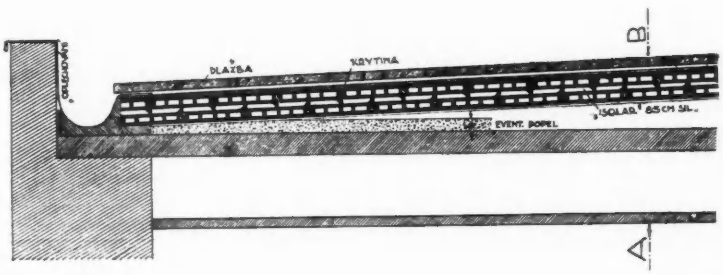
The building is constructed with a reinforced concrete frame. The walling materials are described in Trade Notes on the facing page. The doors generally are of laminated board with a flush gaboon mahogany surface ; those between landings and apartments are of obscure glass in metal rims and frames.

The floors in the rooms and halls are laid with oak, in the kitchens with rubber, in the pantry, bath and w.c. with ceramic tiles, and on the staircase and landings with terrazzo.

The lifts, which run to all apartments, are not shown in the plans, since the arrangement was somewhat modified after the drawings had been made.

In the cellars are laundry and drying rooms.

DESIGNED BY HAVLIČEK AND HONZIK



TRADE NOTES

[*BY F. R. S. YORKE, A. R. I. B. A.*]

Hollow Tile Walls

THE frame and floors of the block of flats in Prague which is, I understand, illustrated in this issue, are of reinforced concrete, and the filling walls and partitions are of Isolar hollow tiles. The architects tell me that the roof also would have been insulated with this material, laid above the structural slab as shown in the diagram at the head of this page, had not the municipal authorities insisted upon a pitched roof "to preserve the amenities of the district." This roof is omitted from the architects' photographs. Not in this country alone it seems is the modern architect hampered by regulations based on muddled reasoning.

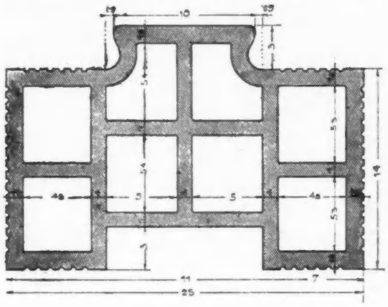


Fig. 1.

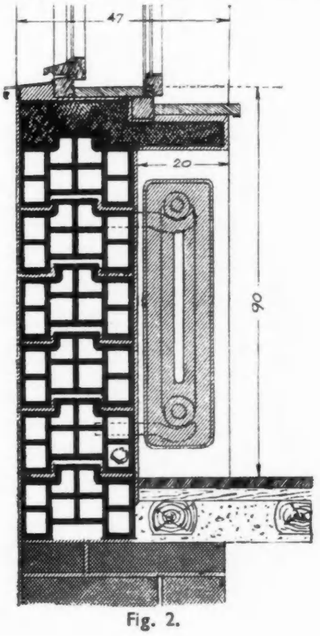


Fig. 2.

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Isolar hollow tiles are made from burnt red brick clay, and are of an interlocking type. The wall filling block (Figs. 1 and 2) is 25 cm. wide, 17 cm. deep and 29 cm. long, and has eight cavities—four across its width—and these, I am told, apart from reducing weight, make the material highly efficient as a sound and thermal insulating medium.

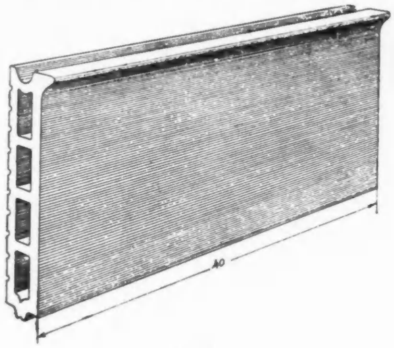

Fig. 3.

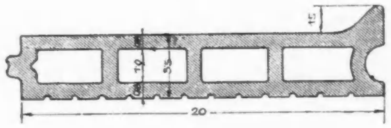

Fig. 4.

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The partition block (Figs. 3 and 4) is 40 by 20 by 3.5 cm., and sound-proof partitions are formed from two thicknesses of these blocks with an interposed layer of insulating felt (Fig. 5).

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The blocks have a projecting nib at one end, which serves as a spacer when two thicknesses are erected together to form a partition, or when a single thickness is erected as a backing to a 4½ in. brick wall (Fig. 6).

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The windows to the flats are double glazed and have wood frames and casements—metal windows are expensive in Czechoslovakia. They are of a standard type incorporating runners and ball bearings that allow all the opening parts to be pushed to one side to provide an entirely open window area. A section through this type of window is shown overleaf.

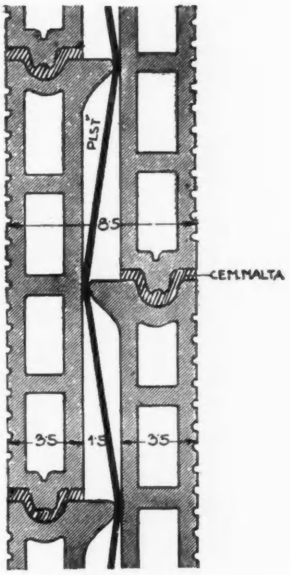

Fig. 5.

An Automatic Disinfector

A new automatic disinfector and deodorizer for domestic or public w.c. and urinal flushing cisterns has recently been introduced by Parker, Winder and Achurch.

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The apparatus, which is placed in front of the ball valve lever in the cistern, re-

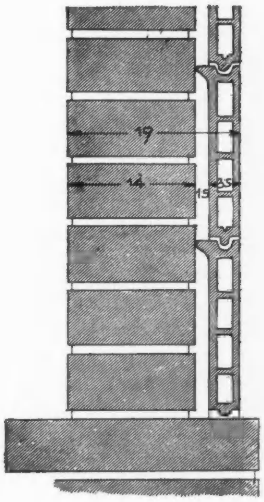

Fig. 6.

sembles an inverted glass jar, and contains about half a pint of disinfectant, which is held within the receptacle by means of a floating cork valve. When water rises within the cistern a predetermined amount of fluid is automatically released to disinfect not only the pan and gullies, but the cistern and flush pipe also.

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It is claimed that where an automatic flush is operated every ten minutes under normal conditions, the incorporation of the patent disinfecting contrivance enables this time interval to be increased to half an hour, and that a recent test showed the economy in water following this increase to be 5,700 gallons in a month.

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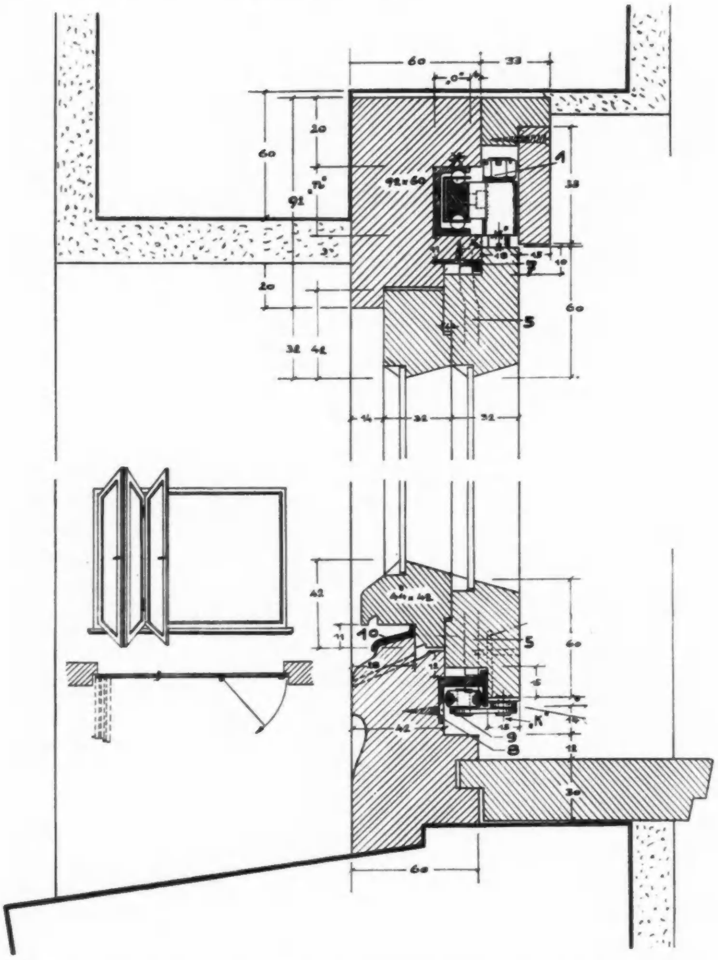
The general household pattern, for 2 or 3 gallon cisterns, costs 8s. 6d., and the public urinal or works type, for a 5 to 10 gallon tank, 12s. 6d. The cost of disinfectant works out at about 1s. 6d. per month for the household type.



A section through the standard double-glazed wood windows used throughout the block of flats in Prague, illustrated on page 276. The window is a sliding-folding type and the inner and outer casements move in unison and need only be parted for cleaning purposes.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue.

Lloyds Bank Ltd., Coventry (pages 261-263). General contractor, William Sapcote and Sons. Quantity surveyor, Leonard Voisey. Sculptor, William Blaze. Sub-contractors : Braithwaite & Co., Engineers, Ltd., steelwork : William Sapcote and Sons, concrete stone (working and fixing), and joinery (general) ; The British Reinforced Concrete Engineering Co., Ltd., reinforcements ; Diespeker & Co., Ltd., concrete floors ; Websters, bricks (commons) ; The Bidford-on-Avon Brick & Tile Co., bricks (facings) ; J. Woodward, Ltd., glazed bricks : Craven Dunnill & Co., Ltd., wall tiling : Wormells, roof tiling : Roberts Adlard & Co., Ltd., roof tiling : Bath and Portland Stone Firms, stone (supply) ; Lyne and Sons, Ltd., terrazzo ; W. H. Fraley and Sons, Ltd., marble ; Val-de-Travers Paving Co., Ltd., asphalt : Charles Richards, Ltd., linoleum ; India Rubber, Gutta Percha and Telegraph Works Co., Ltd., rubber flooring ; H. H. Martyn & Co., Ltd., joinery (fittings) ; Reynolds and Bradwell, electric lighting ; Harcourts, Ltd., electric fittings ; Smith and Ansell, Ltd., electric fittings ; Hope's Heating and Lighting, Ltd., heating and ventilating and hot water supply ; A. D. Foulkes, Ltd., sanitary ware ; Whiteman and Son, plumbing ; The Birmingham Guild, Ltd., art metalwork ; Marley Bros., Ltd., wrought ironwork ; Henry Hope and Sons, Ltd., ornamental leadwork, lantern lights and roof glazing ; C. Trumper and Sons, plastering ; William Bloye, fibrous plaster ; Herbert Morris, Ltd., lifts ; Alfred Brown & Co., ironmongery : J. H. Walker, Ltd., special glass ; J. R. Pearson (Birmingham) Ltd., lift enclosures ; Coventry Glass Co., glazing : James Latham, Ltd., hardwoods (supply) : William Oliver and Sons, Ltd., hardwoods for doors, screens, etc.

High Storrs Secondary School, Sheffield (page 268). General contractors, W. G. Robson, Ltd. Sub-contractors : Brightside Foundry and Eng. Co., Ltd., hot water heating installation ; H. Braithwaite & Co., Ltd., domestic hot water installation ; L. Cooper, Ltd., structural steelwork ; Patent Victoria Stone Co., Ltd., artificial stonework ; Frazzi, Ltd., fire and sound-resisting floors ; British Reinforced Concrete Co., Ltd., reinforcement for concrete ; Farnley Iron Co., Ltd., glazed bricks ; Greggory's Brickyard, stock bricks ; Wilks Bros. & Co., Ltd., S. H. Hinde and F. G. Machin, Ltd., ironmongery ; Electric Supply Dept., electric lighting installation, etc. : Roberts, Adlard & Co., Ltd., roof tiles ; Mellowes & Co., Ltd., patent glazing and metal casements ; Macfarlane & Co., Ltd., rainwater heads ; Flint Bros., Ltd., painting ; G. W. Dawes and Son, plumbing ; C. Outram, plastering ; A. G. Burrell & Co., Ltd., electric clocks ; A. Brown & Co., Ltd., cloakroom fittings ; Adamsez, Ltd., Pickup, Ltd., Woodhouse & Co., Ltd., and Emery & Co., Ltd., sanitary fittings ; W. E. Harrison, lightning conductors ; F. Tory and Sons, stone carving ; P. C. Henderson, Ltd., sliding-door gear ; J. Hadfield and Sons, Ltd., asphalting ; Hodkin & Jones, Ltd., mosaic slabs and wall tiles ; Acme Flooring & Paving Co., Ltd., wood block flooring ; Thornborough and Son, revolving shutter ; Robertson and Russell, Ltd., leaded glazing ; J. W. Wilson (Stoves), Ltd., tiled surrounds and hearths ; Newton Chambers & Co., Ltd., and Moorwoods, Ltd., stoves ; M. Allen & Co., Ltd., access trays and frames ; Manu-Marble, Ltd., artificial marble ; General Electric Co., Ltd., Heyes & Co., Wardle Engineering Co., Ltd., and Hume Atkins & Co., Ltd., electric lighting fittings ; Wilks Bros. & Co., Ltd., staircase balustrades.

House at Huntingdon (page 275). General contractor, J. Smith. Sub-contractors : Henry Hope & Sons, Ltd., windows ; Hinton, Perry & Davenhill, Ltd., tiles.

Housing Progress in Scotland

The following figures show the progress that has been made in State-aided housing schemes in Scotland to July 31, 1933 :—

	Completed.	Under Construction.
1919 Act, by local authorities	25,129	—
,, (by public utility societies) ..	421	—
Private subsidy schemes, 1919 (Additional Powers) Act	2,324	—
1923 Act, by local authorities	4,015	1
,, by private enterprise	26,423	2,765
,, by public utility societies ..	80	—
1924 Act, by local authorities	65,310	7,311
,, by private enterprise	4,610	3,284
,, by public utility societies ..	143	—
Slum Clearance—		
(1) 1923 Act	15,813	958
(2) 1930 Act	7,411	7,859
Not yet allocated between 1924 and 1930 Acts ..	—	190
1931 Act, by local authorities	32	350
1933 Act, by local authorities..	—	46
Demonstration houses ..	17	—
Steel houses erected on behalf of Government by Scottish National Housing Company	2,551	—
	154,279	22,764

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

The Surrey Education Committee is to erect an elementary school at CHEAM, at a cost of £31,830.

Plans passed by the DARTFORD R.D.C. : Two houses, London Road, Kingsdown, for Mr. P. Crawley ; bungalow and tea rooms, East Hill estate, Kingsdown, for Mrs. Elsie Smith ; two bungalows, Rising Sun estate, Ash, for Mr. W. Johnson ; four houses, Warren Road, Hawley, for Mr. H. W. Walker ; development, East Hill estate, South Darenth, for Mr. J. Rupert Mitchell ; two houses, Ash Road, Ash, for Mr. Arthur Goodman ; four houses, Birchwood Road, Wilmington, for Mr. W. H. Skevington ; house and factory, London Road, Stone, for Mrs. L. J. Barber ; two houses, Birchwood Road, Wilmington, for Mr. Edmund W. Scott.

The EALING Corporation has passed the following estate plans : Manor Farm estate, Greenford, for Mr. C. R. W. Chapman ; Greystoke estate, for London and Provincial Building Co., Ltd.

Mr. G. W. Newman, of 8 Bush Hill Road, N.21, has prepared plans on behalf of the Marshall Estates, Ltd., for the development of Uplands estate, Grange Park, ENFIELD, by the erection of 452 houses, and 12 shops.

Plans passed by the ENFIELD U.D.C. : Extensions, Ruberoid works, Brimsdown, for Messrs. H. G. Robinson and Son ; 12 houses, Unity Road, for Messrs. Bethell and Swannell ; billiard saloon, High Street, Ponders End, for Mr. G. Dalman ; two houses, Malvern Road, for Messrs. French and Buchanan ; shop and showrooms, London Road, for Messrs. Bowyer and Bowyer ; three shops and flats, Church Street, for Messrs. Hillier, Parker, May and Rowden ; two houses, Church Road, Ponders End, for Mr. W. D. Huggett ; boiler house, Rolling Mills, Millmarsh Lane, for Messrs. Griggs and Son, Ltd. ; extensions, Cosmos Lamp works, Millmarsh Lane, for Cosmos Lamp Works, Ltd. ; 10 houses, Carterhatch Road, Brimsdown, for Mr. G. Rowland ; 33 houses, Northfield Road, Ponders End, for Mr. G. W. Newman ; four houses, Great Cambridge Road, for Mr. J. A. Judd ; flats, The Chine, Grange Park, for Messrs. King & Co. ; extensions, plywood factory, Lea Valley Road, Ponders End, for Messrs. Dunsmore Bros. ; five houses, Carterhatch Road, for Mr. W. E. Jefferies ; 12 houses, Ladysmith Road, for Messrs. Rowley Bros., Ltd. ; two factory buildings, Queensway, Ponders End, for Churchbury Investment Co., Ltd. ; five houses, Suez Road, Ponders End, for Mr. William Read ; 42 houses, Lincoln Way, for Mr. E. W. Rowe.

The Surrey County Council reports that the Minister of Health has approved generally the scheme involving the erection of a new laundry at the FARNHAM Institution, at an estimated cost of £13,000.

The HASLEMERE U.D.C. is to prepare a scheme for the erection of 24 houses at Eight Acres, Hindhead.

Plans passed by the LEYTON Corporation : Three shops, Church Lane, for Mr. R. C. Clark ; six houses, Seymour Road, for Mr. C. K. Codrington ; additions, Parish Church of St. Mary the Virgin, Church Road, for Mr. J. A. Minty ; six houses, Leigh Road, for Mr. A. E. Radcliffe ; alterations and additions, *Express* newspaper offices, Church Lane, for Mr. R. C. Clark.

Plans passed by the SOUTHALL-NORWOOD U.D.C. : Six flats, Hortus Road, for Miss Keevil ; four houses, Dorset Avenue, for Messrs. Warren and Woods ; 10 houses, Longford Avenue, for Messrs. G. Wimpey & Co., Ltd. ; 62 houses, Lonsdale Road, for General Housing Co., Ltd.

SOUTHERN COUNTIES

Plans passed by the BOURNEMOUTH Corporation : Alterations, 402 Wimborne Road, Winton, for Messrs. J. H. Tett ; alterations and additions, 23 Hamilton Road, for Mr. V. N. Newcome ; alterations, Wentworth College, College Road, for the governors ; alterations, 26 Lorne Park Road, for The Imperial Motors, Ltd. ; additions, glass works, 5 Denmark Road, for Messrs. J. Baxendine and Sons ; alterations and additions (amended plan), Courtlands Hotel, for Mr. W. H. Letley ; alterations, Hotel Burlington, Owls Road, Boscombe, for The Burlington Hotel Co., Ltd. ; conversion into flats, St. Clement's Road, for Mr. H. Howe ; four shops (amended plan), Tuckton Road, for Mr. H. W. Hartley ; two houses, Parham Road, for Mr. H. Burton ; two houses, Draycott Road, for Mr. L. J. Miles ; conversion into flats, 37 Horsham Avenue, for The Hamtun Building Co. ; workshop, 7 and 8 Stourvale Place, for Mr. F. Fall ; 18 houses, Christchurch Road, Iford, for Mr. A. Bedford ; workshop and stores, Norwood Place, for Mr. H. G. Mills ; two houses, Belle Vue Road, for Mr. W. R. Wilkins ; 14 houses, Evershot Road, for Mr. W. J. Clapcott ; 10 houses, Romney Road, for Messrs. George and Harding ; two houses, Harewood Avenue, for Mr. A. Laughton ; two houses, Junction Road, for Mr. A. F. V. Holly ; surgery, etc., rear Sunningdale, Corhampton Road, for Dr. Baker ; two houses, Riverside Road, for Mr. G. B. Ive ; additions, St. Joseph's School, Parkwood Road, for the Rev. Mother Superior ; two houses, West Way, for Mr. E. B. Little ; two blocks of flats, Seabourne Road, for Messrs. A. C. Barnes & Co.

The Surrey Education Committee has approved plans for the erection of a school at Grand Avenue, TOLWORTH, at a cost of £13,250.

Plans passed by the WORTHING Corporation : 11 houses, Hillview Road, 51 Leighton Avenue, etc., for Mr. R. Hasler ; motor showroom and garage, Broadwater Road, for Messrs. A. J. Seal and Partners ; eight houses and shops, South Street, Tarring, for Messrs. Sparkes and Sons ; rebuilding Albion Hotel (revised), Montague Street, for Messrs. Godman and Kay, on behalf of Messrs. Whitbread's Ltd. ; four flats, Chesswood Road, for Mr. S. J. Downer ; four houses, Loxwood Avenue, for Mr. J. E. Lund ; schoolroom, Methodist Church, Lyndhurst Road, for Mr. C. Parsons ; alterations, Baptist Church, Christ Church Road, for Mr. H. J. Capell ; seven houses, Woodside Road, for Mr. E. J. Love, on behalf of Worthing Estates Building Co., Ltd. ; four houses, Mulberry Lane, for Mr. T. J. Wills ; four houses, Sunny Close, for Mr. C. W. Fielder ; five houses, Littlehampton Road, for Mr. H. M. Potter ; 22 houses, Rose Walk, Goldsmith Road, etc., for Mr. M. R. Fletcher ; four houses, Lancaster Road, for Messrs, Treacher and Farmer ; two houses, Peverel Road, for Messrs. Jordan and Cook, Ltd. ; three houses, Sea Place, for Messrs. Middleton and Cathcart ; three houses, High Street, Tarring, for Mr. A. T. W. Goldsmith.

SOUTH-WESTERN COUNTIES

Plans passed by the TORQUAY Corporation : Public house, Barton Hill Road, for Plymouth Breweries Co., Ltd. ; five shops, Redden Hill Road, for Mr. J. H. Tearle ; two houses, Cedar Court estate, for Messrs. H. Lloyd and Son ; four houses, Lymington Road, for Messrs. S. Blatchford and Son ; four houses, Reves Road, for Chelston Building Co. ; additions, parish rooms, Ellacombe Church Road, for Church Council ; two houses, St. Vincent's Road, for Mr. J. T. Sture ; two houses, Torwood House estate, for Messrs. Stuckey and Davey.

MIDLAND COUNTIES

The NOTTINGHAM Corporation has approved a slum clearance schedule necessitating the erection of 4,023 houses for displaced tenants.

The WOLVERHAMPTON Corporation is to erect 1,236 houses in the next five years.

Plans passed by the WOLVERHAMPTON Corporation : Six houses, Oxley Moor Road, for Messrs. Brooks & Co. ; six houses, Windsor Avenue, for Mr. P. Blundell ; six houses, Oxley Moor Road, for Mr. C. H. Whitehouse ; two houses, Penn Court estate, for Messrs. Shutt Bros. ; 20 houses, Arthur Street, for Mr. J. Walton ; four houses, off Willenhall Road, for Mr. J. V. Senior ; four houses, Pendeford Road, for Mr. A. E. Perks ; six houses, Bee Lane, for Mr. W. H. S. Morris ; additions, St. Chad's College, Old Fallings, for Marist Brothers ; six houses, Ocley Moor Road, for Bushbury Estate and Building Co. ; vestry and cloakroom, Merridale Road, for Presbyterian Church trustees ; 2 houses, Warstones Road, for Messrs. W. and A. Dalton ; four houses, Oxley Moor Lane, for Mr. L. C. Lymer ; 20 houses, Cannock Road, for Mr. M. A. Boswell ; alterations, warehouse, etc., Cornhill, for Messrs. J. N. Miller & Co., Ltd. ; two houses, Mount Street, for Mr. J. Harris ; 20 houses, Arthur Street, for Mr. A. N. Bloxham ; car park and petrol store, Broad Street, for Messrs. Law and Bowser.

NORTHERN COUNTIES

Plans passed by the OTLEY U.D.C. : Eight houses, Garnett Street, for Mr. G. Renwick ; two houses, Station Road, for Mr. Briggs.

Plans passed by the SOUTH SHIELDS Corporation : 11 houses, Ethel Terrace, for Messrs. R. Summerbell and Sons ; two bungalows, off Wenlock Road, for L.N.E.R. Cottage Homes Fund ; amended lay-out, Sunnyside estate, for Mr. Geo. R. Smith ; alterations, 7, Winchester Street, for Sun Permanent Building Society ; flats, Smith Street, for Mr. F. W. Newby ; pavilion, Wood Terrace, for S. Shields Football Club ; alterations, 31-3, John Clay Street, for Messrs. J. W. Hanson and Son ; shop, Talbot Road, for Mr. R. W. Weir ; three bungalows, off West Avenue, for Messrs. J. H. Morton and Son ; flats, Sunderland Road, for Mr. N. H. Willis.

Plans passed by the SOUTHPORT Corporation : 58 houses, off North Road, Crossens, for Mr. G. H. Ball ; two shops and houses, Hesketh Drive, for Messrs. A. H. and E. W. Jackson ; three shops and two houses, Preston New Road, for Mr. Alfred James ; shop and two houses, Cleveleys Road, for Mr. Richard Lloyd.

The SOUTH SHIELDS Corporation is to acquire land in the Simonside district for rehousing, in connection with slum clearances, which will necessitate the provision of 1,800 houses in the next five years.

Plans passed by the STRETFORD U.D.C. : Formation and sewering, Manor Road, etc., for Sir H. E. de Trafford, Bt. ; 78 houses, Manor Road, for Messrs. Archer and McAlpin ; two houses, Tresco Avenue, for Messrs. Littler and Rich ; elevator and hopper, Third Avenue, for Mr. T. Maiden ; workrooms and dormitories, Worrall House, Chester Road, for the Royal Residential Schools for Deaf ; alterations, Hayesleigh Hostel, Montague Road, for Henshaw's Institution for the Blind ; bakehouse, 878, Chester Road, for Mr. H. Bond ; store, 168, Seymour Grove, for Messrs. Smith and Allcock, Ltd.

The WALLSEND Corporation is to erect 84 houses on the Holy Cross estate, at a cost of £31,600.

Plans passed by the WALLSEND Corporation : Two houses, Kings Road, for Mr. H. Hunter ; two houses, Churchill Street, for Mr. Skelley ; sub-station, Coronation Street, for North Eastern Electric Supply Co. ; shop and four houses, Station Road, for Mr. J. McHarg ; 58 houses, vicinity of Churchill Street, for Battle Hill Estate Co.

The WHICKHAM U.D.C. is to reconstruct Dunston Bridge, at a cost of £22,136.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	BANBURY	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5	1 0¾
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A	Cumberland	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	HALIFAX	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	JARROW	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	LANCASTER	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W. Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	PAISLEY	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	TAMWORTH	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1 1¼
A	Tyne District	N. E. Coast	1 5½	1 1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	YARMOUTH	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

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* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	"		1	7
Joiner	"		1	7
Machinist	"		1	8
Mason (Banker)	"		1	7
" (Fixer)	"		1	8
Plumber	"		1	7
Painter	"		1	6
Paperhanger	"		1	6
Glazier	"		1	7
Slater	"		1	7
Scaffolder	"		1	3
Timberman	"		1	3
Navvy	"		1	2¼
General Labourer	"		1	2¼
Lorryman	"		1	5
Crane Driver	"		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	"	1	16	6
Hydrated Lime	"	3	0	9
Portland Cement	"	2	6	0
Rapid Hardening Cement	"	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	"		7	6
Building Sand	"		7	9
Washed Sand	"		8	9
2" Broken Brick	"		8	3
¾" " "	"		11	0
Pan Breeze	"		6	6
Coke Breeze	"		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	"	3	6	5	3
Rest bends	"	4	3	6	3
Single junctions	"	3	6	5	3
Double "	"	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	"	4	6	6	6
Channel tapers	"	2	9	4	0
Yard gullies	"	6	9	8	9
Interceptors	"	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	"	9	0	15	0
Single junctions	"	8	9	18	0
Double junctions	"	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	"		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	"	3	0	0
Phorpres bricks	"	2	18	0
Stocks, 1st quality	"	4	11	0
" 2nd "	"	4	2	6
Blue Bricks, Pressed	"	9	2	6
" Wirecuts	"	8	2	6
" Brindles	"	7	6	6
" Bullnose	"	9	14	0
Red Sand-faced Facings	"	6	18	6
Red Rubbers for Arches	"	12	0	0
Multicoloured Facings	"	8	8	0
Luton Facings	"	8	0	0
Phorpres White Facings	"	3	17	3
Phorpres Rustic Facings	"	3	12	3
Midhurst White Facings	"	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	"	21	10	0
Headers	"	21	0	0
Bullnose	"	28	0	0
Double Stretchers	"	30	0	0
Double Headers	"	27	0	0
Glazed Second Quality, *Less*	"	1	0	0
" Buffs and Creams, *Add*	"	2	0	0
" Other Colours	"	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" " " "	"		1	10
3" " " "	"		2	1
4" " " "	"		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
" " Basebed	"	4	9
Bath stone	"	2	11
York stone	"	6	6
" " Sawn templates	"	7	6
" " Paving, 2"	F.S.	1	8
" " " 3"	"	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	"	24	10	0
20" × 10" Countesses	"	19	5	0
18" × 10" Viscountesses	"	15	10	0
18" × 9" Ladies	"	13	17	6
Westmoriand green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
" green "	"	24	7	4
Best machine roofing tiles	"	4	10	0
Best hand-made do.	"	5	0	0
Hips and valleys	each			9½
" hand-made	"			10
Nails, compo	lb.		1	4
" copper	"		1	6

CARPENTER AND JOINER

			s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	" "			5
" " 2nds	" "			4
Mahogany, Honduras	" "		1	3
" African	" "		1	1
" Cuban	" "		2	6
Oak, plain American	" "		1	0
" Figured "	" "		1	3
" Plain Japanese	" "		1	2
" Figured "	" "		1	5
" Austrian wainscot	" "		1	6
" English	" "		1	11
Pine, Yellow	" "		1	0
" Oregon	" "			4
" British Columbian	" "			4
Teak, Moulmein	" "		1	3
" Burma	" "		1	2
Walnut, American	" "		2	3
" French	" "		2	3
Whitewood, American	" "		1	1
Deal floorings, ¾"	Sq.		19	0
" ⅞"	"	1	1	6
" 1"	"	1	3	6
" 1¼"	"	1	7	6
" 1½"	"	1	12	0
Deal matchings ⅝"	"		14	0
" ¾"	"		15	6
" 1"	"	1	4	0
Rough boarding ¾"	"		16	0
" 1"	"		18	0
" 1½"	"	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1¼"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
" 3"-11½" long	"	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	"	11	1/3	2/2	2/10	5/3
" " 3"-11½" long	"	8	10	1/5	1/11	3/6
Bends	"	8	11	1/7½	2/7½	5/2
Springs not socketed	"	5	7	1/1½	1/11½	3/11
Socket unions	"	2/-	3/-	5/6	6/9	10/-
Elbows, square	"	10	1/1	1/6	2/2	4/3
Tees	"	1/-	1/3	1/10	2/6	5/1
Crosses	"	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	"	3	4	6	8	1/3
Diminished sockets	"	4	6	9	1/-	2/-
Flanges	"	9	1/-	1/4	1/9	2/9
Caps	"	3½	5	8	1/-	2/-
Backnuts	"	2	3	5	6	1/1
Iron main cocks	"	1/6	2/3	4/2	5/4	11/6
" " with brass plugs	"	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61¼	" water	47½
Steam	57½	" steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	" water	42½
Steam	47½	" steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	"	8	6
" " ⅜"	"	8	3
" " ½"	"	8	0
" " ⅝"	"	7	6
" " ¾"	"	7	6
" " 1"	"	7	6
" " 1¼"	"	7	6
" " 1½"	"	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	"	5	0	8	6
Boots	"	3	3	4	5
Bends	"	2	9	4	0
" with access door	"	—		6	9
Heads	"	4	0	5	0
Swan-necks up to 9" offsets	"	4	0	6	3
Plinth bends, 4½" to 6"	"	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	"	1	7	1	11
Obtuse angles	"	2	0	2	6
Outlets	"	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	1	0
" drawn pipes	"		18	0
" soil pipe	"	1	5	0
" scrap	"		13	6
Solder, plumbers'	lb.			10
" fine do.	"		1	0
Copper, sheet	"			10½
" tubes	"			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	"	1	1	1	3	2	8
Galvanized	"	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	"	3	9	5	3	10	3
Shoes	"	2	10	4	4	9	6
Heads	"	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	"	2	10	0
" fine	"	4	15	0
Hydrated lime	"	3	0	9
Sirapite	"	3	6	0
Keene's cement	"	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
" rent	"		3	9
Lath nails	lb.			3½

GLAZIER

		s. d.		s. d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.			2¾
" " 26 oz. " " "	"			3¾
Arctic glass, white	"			7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	"			6½
⅛" Hartley's rough rolled	"			7
¼" " wired cast	"			10
¼" Georgian wired cast	"			11
¼" Polished plate, n/e 1 ft.	"	†7½	to	‡1 0
" " 2	"	†10	"	‡1 3½
" " 3	"	†1 4½	"	‡1 10
" " 4	"	†1 11	"	‡2 4
" " 6	"	†2 3	"	‡2 7½
" " 8	"	†2 5	"	‡3 0½
" " 12	"	†2 10	"	‡3 3½
" " 20	"	†3 3½	"	‡3 9
" " 45	"	†3 6½	"	‡4 0½
" " 65	"	†3 11½	"	‡4 4
" " 90	"	†4 4	"	‡4 9
" " 100	"	†4 6	"	‡4 11
Vita glass, sheet, n/e 1 ft.	"			1 0
" " " " 2	"			1 3
" " " over 2	"			1 9
" " plate, n/e 1 ft.	"			1 6
" " " 2	"			3 0
" " " 5	"			4 0
" " " 7	"			5 0
" " " 15	"			6 0
" " " over 15	"			7 6
Putty, linseed oil	lb.			3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2¼
Boiled oil	"		2	4½
Turpentine	"		4	1¼
Patent knotting	"		14	0
Distemper, washable	cwt.	3	0	0
" ordinary	"	2	5	0
Whitening	"		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	"		14	0
Outside varnish	"		16	0
White enamel	"	1	15	0
Ready-mixed paint	"		13	6
Brunswick black	"		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
„ to reduce levels n/e 5' 0" deep and cart away	Y.C.		8	6
„ to form basement n/e 5' 0" deep and cart away	„		9	0
„ „ 10' 0" deep and cart away	„		9	6
„ „ 15' 0" deep and cart away	„		10	0
If in stiff clay . . . add	„		2	6
If in underpinning . . . „	„		4	0
Digging, return, fill and ram . . . „	„		4	0
Planking and strutting to sides of excavation	F.S.		1	0
„ „ to pier holes	„			5
„ „ to trenches	„			5
„ „ extra, only if left in	„			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	„	1	6	0
„ „ „ (4-2-1)	„	1	12	6
„ „ „ underpinning	„	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and gratings	„	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
„ „ in cement	„	29	15	0
„ Stocks in cement	„	35	15	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			5½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
½" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	„	6	9
¾" paving or flat	„	4	0
1" paving or flat	„	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	„	3	7	0
Do., 24" × 12"	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles	„	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	„	4	6	6
„ „ „ „ „ „ (green)	„	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" „ „ „ „	„	1	17	6
1¼" „ „ „ „	„	2	3	0
¾" × 2" fir battening for Countess slating	„		9	6
Do. for 4" gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1½" „ „ „ „	„		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	„	2	12	6
1½" do.	„	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1½" do.			1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" „ „	„	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	3	9
2" „ „ „	„	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" „ „ „	„	2	8
1½" „ but moulded both sides	„	2	4
2" „ „ „	„	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" „ „	„	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½" deal moulded wall strings	„	2	1
1½" „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" „ „	„	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	6
Do. in flashings		1	18	0
Do. in covering to turrets, etc.	„	2	4	0
Do. in soakers	„	1	10	0
Labour to welted edge	F.R.			3½
Open copper nailing	„			3½
Close „ „	„			4½

		½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1¼" s.	1¼" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks	F.R.	1	0	1	2	1	5	2	1	3	0	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	3
Do. to stop ends	„		6½		8		9		11	1	3	—	
Boiler screws and unions	„	3	3	3	9	5	0	8	0	—		—	
Lead traps	„	—		—		—		6	3	8	9	—	
Screw down bib valves	„	6	9	9	6	11	0	—		—		—	
Do. stop cocks	„	9	0	11	0	14	6	20	6	47	0	—	

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

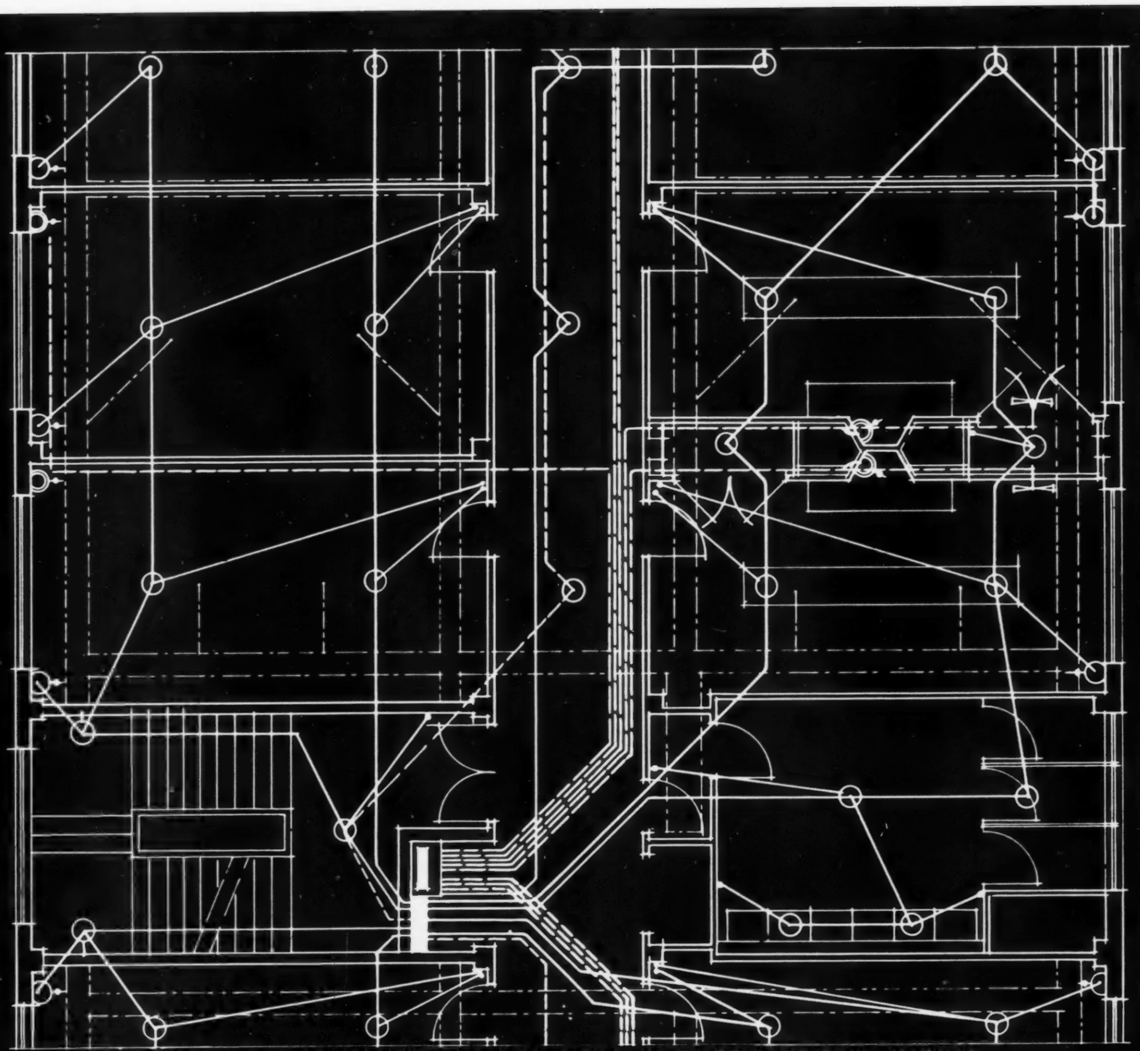
		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	9
Do. vertical	„		2	3
Rough render on walls	„		1	4
Render, float and set in lime and hair	„		2	0
Render and set in Sirapite	„		2	2
Render, backing in cement and sand, and set in Keene's cement	„		3	1
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1" girth	„			1½
1" granolithic pavings	Y.S.		3	6
1½" „	„		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	„		17	6
9" × 3" „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

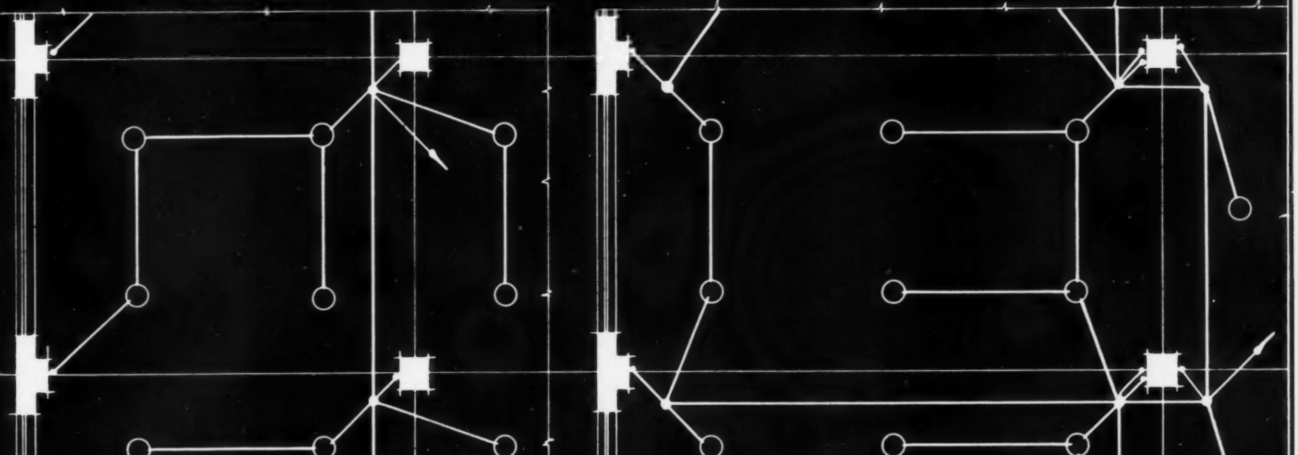
		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	„	2	9



TYPICAL FORM OF LAYOUT WHERE POSITION OF PARTITIONS IS KNOWN.



TYPICAL FORMS OF LAYOUT WHERE POSITION OF PARTITIONS IS NOT KNOWN.

INFORMATION SHEET: DIAGRAMMATIC LAYOUT OF ELECTRIC CONDUITS

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS • 33 • ELECTRIC LIGHTING: II

INFORMATION SHEETS

• 33 •

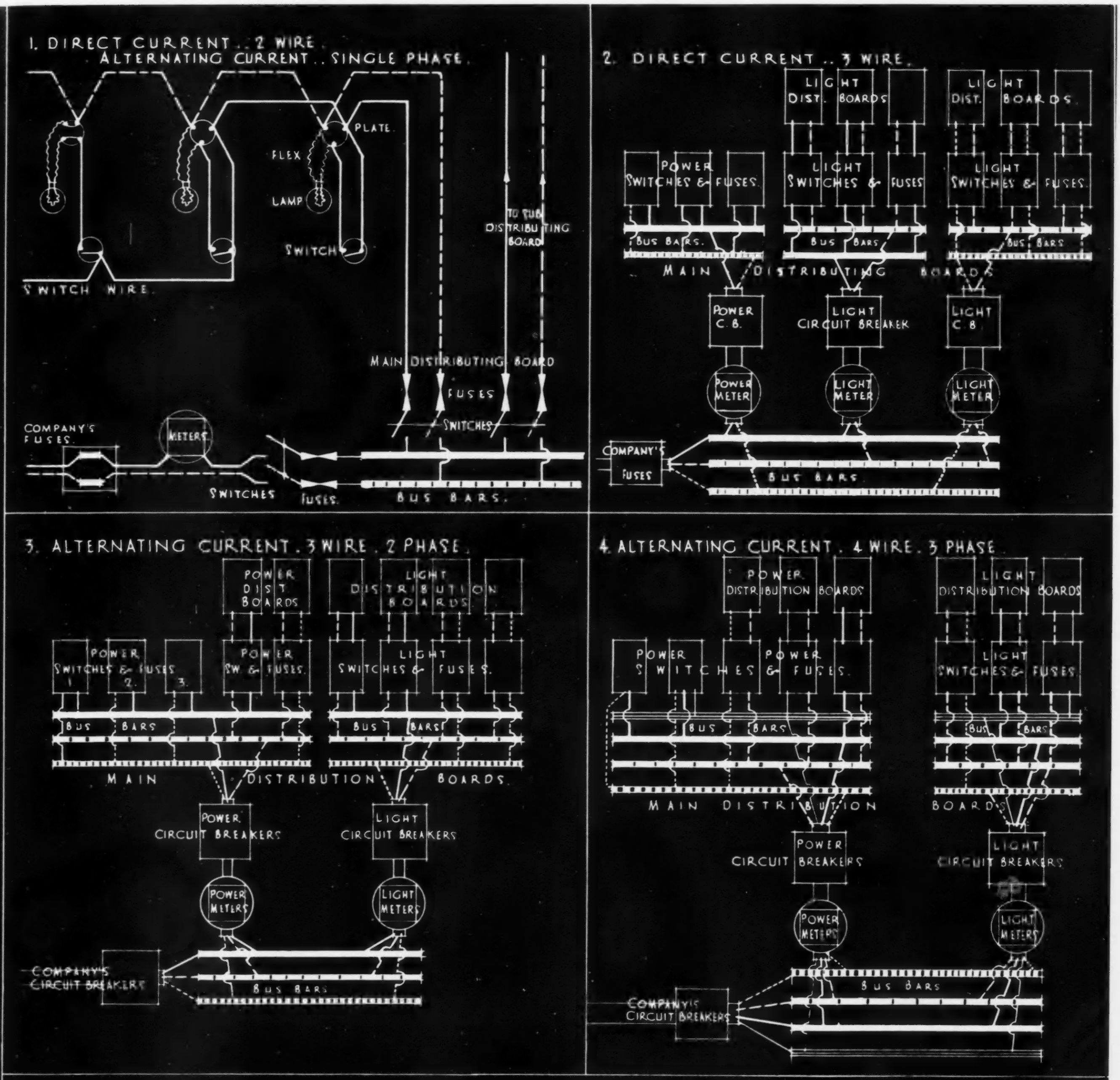
ELECTRIC LIGHTING: II

•

THIS week we publish the second and third of a series of Information Sheets dealing with electric lighting. The fourth and last of this series will appear next week, together with a Sheet giving the diagrammatic lay-out of vacuum cleaning systems.

The following is a full list of the subjects previously issued:—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units: 1.
13. Apr. 12—Lavatory Units: 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs: 1.
23. June 29—Concrete Stairs: 2.
24. July 6—Pressed Steel Stairs: 1.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs: 2.
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes: 1.
30. Aug. 17—Lay-out of Wardrobes: 2.
31. Aug. 24—Common Sizes Miscellaneous.
32. Aug. 24—Electric Lighting: 1.


1. DIRECT CURRENT .. 2 WIRE.
ALTERNATING CURRENT .. SINGLE PHASE.
PLATE
FLEX
LAMP
SWITCH
SWITCH WIRE
TO SUB DISTRIBUTING BOARD
MAIN DISTRIBUTING BOARD
FUSES
SWITCHES
COMPANY'S FUSES.
METERS.
SWITCHES
FUSES.
BUS BARS.
2. DIRECT CURRENT .. 3 WIRE.
LIGHT DIST. BOARDS
POWER SWITCHES & FUSES.
LIGHT SWITCHES & FUSES
BUS BARS.
MAIN DISTRIBUTING BOARDS
POWER C.B.
LIGHT CIRCUIT BREAKER
LIGHT C.B.
POWER METER
LIGHT METER
COMPANY'S FUSES
BUS BARS.
3. ALTERNATING CURRENT. 3 WIRE. 2 PHASE.
POWER DIST. BOARDS
LIGHT DISTRIBUTION BOARDS
POWER SWITCHES & FUSES 1. 2. 3.
POWER SW. & FUSES.
LIGHT SWITCHES & FUSES.
BUS BARS
MAIN DISTRIBUTION BOARDS.
POWER CIRCUIT BREAKERS
LIGHT CIRCUIT BREAKERS
POWER METERS
LIGHT METERS
COMPANY'S CIRCUIT BREAKERS
BUS BARS
4. ALTERNATING CURRENT. 4 WIRE. 3 PHASE.
POWER DISTRIBUTION BOARDS
LIGHT DISTRIBUTION BOARDS
POWER SWITCHES & FUSES.
LIGHT SWITCHES & FUSES.
BUS BARS
MAIN DISTRIBUTION BOARDS
POWER CIRCUIT BREAKERS
LIGHT CIRCUIT BREAKERS
POWER METERS
LIGHT METERS
BUS BARS
COMPANY'S CIRCUIT BREAKERS

IDENTIFICATION OF CABLES BY COLOUR (Extract from I.E.E. Wiring Regulations 9th Edition 1927)

A. FOR DIRECT CURRENT SUPPLY : Two-wire circuits connected to a two wire system of wiring RED for positive or switch wire.
: BLACK (or blue) for negative.
b. Two-wire circuits connected to the neutral & one side only of a three wire system : RED for outers
: BLACK (or blue) for neutral.
c. Two wire or three wire circuits connected to a three wire system except as in "b" above
RED for positive or switch wire, BLACK (or blue) for neutral
WHITE (or yellow) for negative or switch wire.

B. FOR ALTERNATING CURRENT SUPPLY : a. Single phase two-wire system of wiring : RED for one conductor or switch wire, BLACK (or blue) for other conductor.
b. Single phase three wire system of wiring : RED for one conductor or switch wire, BLACK (or blue) for neutral.
: WHITE (or yellow) for other conductor or switch wire.
c. Two phase three-wire system of wiring : RED for one phase, BLACK (or blue) for neutral.
: WHITE (or yellow). for other phase
d. Two-phase four-wire system of wiring : RED for one phase, WHITE (or yellow) for other phase.
e. Three phase three wire system of wiring : each conductor RED, WHITE (or yellow) & GREEN respectively.
f. Three-phase four-wire system of wiring : RED, WHITE (or yellow) & GREEN for the three phases,
: BLACK (or blue) for neutral.

INFORMATION SHEET : DIAGRAMMATIC LAYOUT OF SYSTEMS OF ELECTRIC SUPPLY.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1

INFORMATION SHEETS

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ELECTRIC LIGHTING : III

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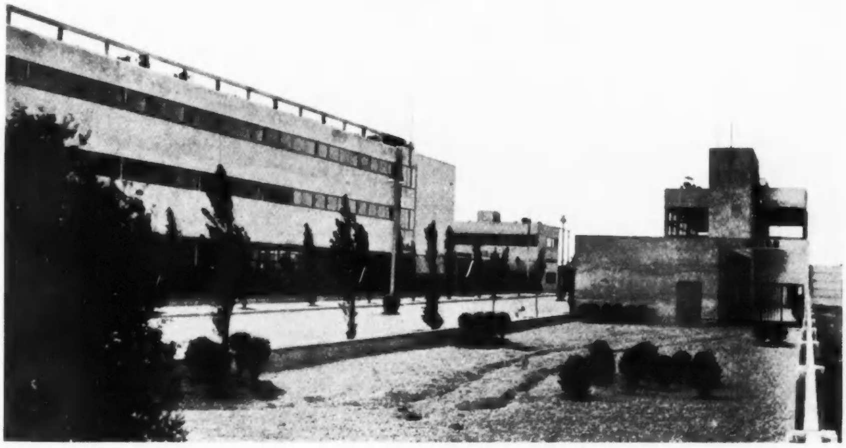
FOR a list of the Information Sheets previously issued, see the other Sheet accompanying this issue.

A SCHOOL NEAR PARIS
FOR THE COMMUNIST MUNICIPALITY



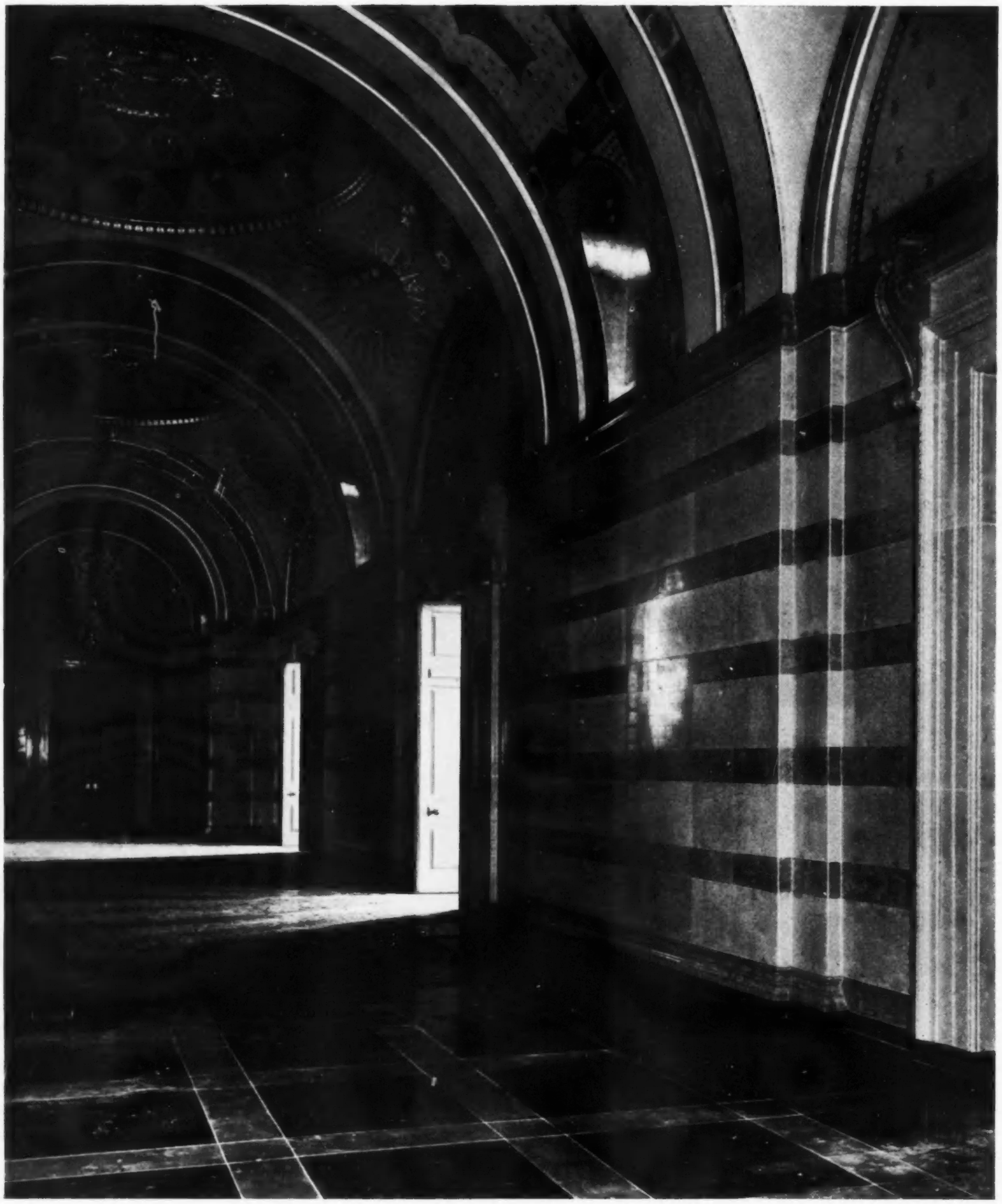
THIS school group in the Avenue Karl Marx at Villejuif, Paris, was designed for the Communist Municipality by André Lurçat, and completed in the earlier part of this year.

The school is for young children, and the boys' and girls' departments are grouped in a single building with common kitchen, lecture hall, doctors' room, etc.

The site is traversed by the avenue, on one side of which are the schools and école maternelle *and on the other the gymnasium, showers and sports ground. A subway unites the three schools with the gymnasium group.*

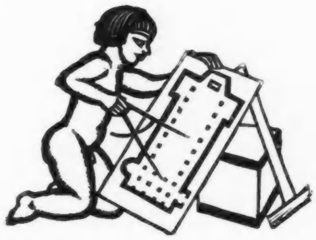
The corridors and cloakrooms are on the north, and all classrooms on the south, opening on to the playgrounds.

See also page 287.



THE CIVIC HALL, LEEDS

The reception hall, in the new Civic Hall at Leeds, designed by Mr. E. Vincent Harris, forms the connecting space between the principal staircase and the assembly hall. It has a floor of black marble, and walls of Hopton Wood stone in alternate light and dark bands. The three saucer domes which form the roof are decorated with coloured mosaic and have concealed lighting round their base. Further illustrations of the building appear on pages 297-299 of this issue.



TOWN PLANNING PROSPECTS

THE Town Planning Summer School and Study Conference begins at Welwyn next Monday. There papers and addresses will be given* by many of the leading practitioners, and discussions held on various aspects of the subject.

There has been, owing to the enthusiasm of town-planners and a few enlightened bodies, an immense amount of propaganda in recent years, emphasizing the necessity of town-planning in the modern state; and, helped by the passing (even though in a mutilated form) of the Town and Country Planning Bill, it appears that at last the importance of town-planning has penetrated to the public ear.

The public has assimilated nearly as much of its lesson as can be expected until more actual examples, to demonstrate the benefits of town-planning, are before its eyes. The preliminary propaganda work having been done, it is by practical examples—the carrying out of actual town-planning schemes—that the lesson can best be rammed home. The production of such examples, then, is the next step in the education of the public as well as in improving our social conditions and topographical amenities.

Town-planning, however, is an art which, like architecture, but unlike any of the other arts, is dependent on commission by private patron or public body before any project can actually be undertaken. The aims and theories of town-planning can be endlessly reiterated and, of course, valuable research undertaken, but without the patronage of those in authority the most enthusiastic and well-equipped town-planner is, as a practical man, helpless.

It is therefore particularly encouraging to note that part of the programme of the Welwyn conference is given to discussion of *Problems of Local Government and Public Expenditure in relation to Town and Country Planning and Housing*; for local government bodies are today the patrons on whom town-planning has to depend.

In England under the Regency building was for once controlled by men with a sense of civic responsibility, and innumerable pieces of admirable town-planning were executed—one of these, at Wolverhampton, was illustrated in our last issue. Many of them remain; they are to be found in all parts of the country, but usually unappreciated and with their symmetry spoiled and—more important for our immediate purpose—with their example ignored. Publicly elected bodies are our democratic substitute for the Regency patron, and without their co-operation the town-planner must plan in vain.

The local government bodies are responsible for the plans of our towns—or rather for the absence of plans; for their crime is that they do not plan, though the new Bill gives them every facility for doing so. Their crime is contributory negligence and the evidence the muddled and misdirected growth of the majority of our towns.

There is an example of this kind of negligence now observable at Coventry, where an entirely new street has recently been run across a demolished area. Here, one would have thought, was an opportunity apparent even to the least imaginative councillor of ensuring that one part of Coventry was built in an orderly and dignified manner. The street itself is now completed and lined with hoardings behind which is empty building land, but the city council have refused the opportunity of developing the frontages on a co-ordinated basis, or allowing someone else to do so. They are letting off the sites in small lots to anyone who will promise to build. Another street of haphazard growth is being permitted, and, for all the evidence of progress it will show, we might not have advanced an inch in appreciation of town-planning since the days of mid-Victorian commercial selfishness. Such an attitude as this is not universal, but it is by no means exceptional; witness the appearance of our arterial roads much nearer home than Coventry.

Whether the fault lies in our system of local government, and in the representation by many conflicting commercial interests that that system involves—whether some more dictatorial system such as that of the *city manager* (accepted in America and now being experimented with in Ireland) would be an improvement, are hard questions to answer, but some suggestions may be forthcoming from consideration of these problems at Welwyn.

It is not the abandonment or even the modification of popular influence that is needed, for popular influence is more and more on the side of town-planning; but a form of local government that will translate uninstructed popular willingness to plan into action by the skilled town-planner.

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* A full programme of the Welwyn Conference is given on pages 288-289 of this issue.

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NOTES & TOPICS

THE TOWN PLANNING SUMMER SCHOOL

THE Town and Country Planning Summer School, which is to take place at Digswell Park Conference House, Welwyn Garden City, from the 11th to the 17th of this month, is going with a rush. I understand from Dr. Thomas Adams that applications have been such that it will have to be decided to close the lists for lack of accommodation.

*

I think the prospectus is reproduced elsewhere in this issue and among speakers and group leaders there are those who will ask pertinent questions of the way of town-planning in this troubled world today.

*

The idea of having smallish discussion groups with a leader is very sound. I have sampled the system in other places and found it most stimulating and provocative. The presence of someone capable of drafting results and decisions intelligently and honestly is very helpful, either as garnering pearls of wisdom that drop from the spate of words or as proving the excitement of debate to be little more than that. Both useful things.

*

In any case practice and theory will meet together at Welwyn: the results cannot help but be interesting.

*

THE TOURIST STYLE OF BUILDING

I passed through a number of slowly growing villages in my recent quick visit to Switzerland. As in the Austrian countryside, traditional building methods go on today, uninterrupted by the incursions of new materials.

*

Those cuckoo-clock chalets, so diverse in their ornament, so exactly alike in general effect, are still built of wood. One imagines that all modern industrial contributions to building will be kept out of the tourist countries. They will become picturesque "preserves," guarded from any disrupting attempts to develop a national style with the new materials of this age of glass, steel and concrete.

*

MAMMON MAKETH MAN

Up on one of the rather showy mountains of tourist-land, I witnessed a touching scene, illustrating how beauty is valued by English travellers. A tourist had with great care grubbed up a yellow flowering rock plant, and there was a buzz of discussion as to ways and means of getting it back to England.

*

The discussion was cut short by the guide, who mentioned that it was a common enough growth that could be bought at Woolworth's anywhere. Thereupon it ceased to be beautiful in the eyes of the woman who had ravished it from its rocky bed, and was promptly discarded.

*

The same spirit that inspired the horrid millionaire to say: "Sunsets aren't beautiful—they don't cost anything!"

*

MORE LONDONS FIT FOR HEROES

The trouble about so many schemes of slum clearance in London is that, like Mr. Charles Boot's recent prodigious plan, they neglect entirely to deal with London. It's all very well to say that clearing the East End is jolly difficult and too expensive and means building high blocks and so on, but if every man of the "shift them out" persuasion were given his way London would become a ring of towns spreading into the dim distance round a rotten and nearly deserted core.

*

You can't go on for ever "decanting" on the Manchester plan, spoiling fresh pastures at each attempt. Somewhere the limit has to be reached and the sordidness we call

SKETCH CLUB

Readers may remember that some weeks ago we remarked in our leading article that architects on holiday have numerous opportunities of making passing notes of architectural details that their professional eye observes; and that many fail to take advantage of them or, through hurry or the holiday feeling, allow their notes to remain only mental, so that they are quickly forgotten.

There must be some (architects perhaps who have not lost the student habit of ubiquitous note-taking) who do bring back from holiday a sketch-book or two containing notes and diagrams made on the spot, in the vague hope that they may come in useful at some time when a solution of a similar problem is needed—or just because they are interesting.

Such notes as these would be interesting to most architects; and we suggest that our Sketch Club pages could be useful in broadcasting, in the unselfish way that architects have, ideas that are thus picked up.

The Sketch Club pages in the past have been confined to finished drawings and paintings, but sketches and diagrams (with perhaps one or two dimensions and a few words of explanation) serve the before-mentioned purpose best, and any notes of this nature that might have a general interest, will in future be equally welcomed.

London must be tackled as a problem of *constructive* town-planning, with slum clearance as handmaiden.

*

Each time you leave it it has still to be done—but with a new bill for a new town added to it, vast new transport costs, and a London unmanageable to a heightened degree.

*

London is generally a two-storey congestion on a hopeless plan. Plan and clearance go together or clearance is a waste of time and money.

*

I don't care a toss how many towns they build on the outskirts. So long as they leave the inside for somebody else to do, it has still got to be done.

*

A SCHOOL BY ANDRÉ LURÇAT

The schools designed by André Lurçat for the Communist Municipality of Villejuif, Paris, are now complete, and I believe the children are to move in for the autumn term.

*

Most of the equipment and furniture was designed by the architect. The desks, chairs and tables are in three or four sizes for children of various ages, but all quite small, so that it is surprising to find the rooms so high, the corridors so wide, and the doorways more than usually large.

*

It is surprising, too, to find in the classrooms, so much light and so little ventilation. I am perhaps unfair in drawing attention to these faults, for they are the only ones I found in one of the finest elementary schools I have ever seen.

*

The cost per place must have been much greater than can normally be afforded in school building, but if, as rumour has it, a large proportion of the money was advanced from Moscow, this is understandable, for such a building does indeed provide convincing propaganda.

*

Even the architect did himself well, in the matter of site accommodation; for he had the exclusive use of a charming little concrete box, mounted on stilts, and provided with a large window, commanding a view of the whole of the site, from which he was able to observe progress in building operations.

*

RE-EXPORTS OF DESIGN

I was told by an architect who does a great deal of industrial designing about a queer symptom of the American depression, namely the development of an American inferiority complex.

*

An English company (which we will call A. Ltd), making a certain new material, wrote to a similar company in the United States asking if they could recommend a designer, as America was the home of progress, and this, that and the other. The American company wrote to another English company (which we will call B. Ltd.) who were handling products of a comparable character, though non-competitive with those manufactured by A. Ltd., and asked them to suggest a suitable designer.

*

The architect's office on the site of the school near Paris, referred to by Astragal on this page. A photograph of the school appears on page 283.

B. Ltd., wrote to the American company suggesting the name of the architect who told me the story, and his name was relayed by the American company, with the usual cordial expressions of goodwill that embellish American business correspondence, to A. Ltd., who wrote expressing their gratitude, though no doubt they were a little surprised that a mere Englishmen should be considered capable of designing.

*

They have now commissioned my architect friend on the strength of these exported and re-exported recommendations concerning his ability.

*

That's international organization, I suppose, although plain people might employ a shorter and more homely description of such complicated procedure.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, September 7
SHIPPING, ENGINEERING AND MACHINERY EXHIBITION. At Olympia. Until September 23.

Friday, September 8
INSTITUTION OF GAS ENGINEERS. Visit to Canada and the United States for the 26th Canadian Gas Convention and the 15th American Gas Convention and the Chicago Centennial International Exposition. The party will return to England on October 16.

Saturday, September 9
Sunrise 6.26 a.m. Sunset 7.28 p.m.

Monday, September 11
TOWN AND COUNTRY PLANNING SUMMER SCHOOL. At Digswell House, Welwyn Garden City. Until September 17. The speakers will include Sir Raymond Unwin, PP.R.I.B.A., Sir Theodore Chambers, Sir Ernest Simon, Dr. I. G. Gibbons and Mr. G. L. Pepler.

NEWS

◆

POINTS FROM THIS ISSUE

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Achievement of an architectural panel 290

An Irish authority to control the exhibition, whether on the ground, on any structure, or in the air, of all forms of visible or audible advertisements 296

An hotel " as comfortable as if it were on the Continent " 301

There are no slums in Cardiff (official opinion)—30% of the dwellings within one mile of the docks require immediate demolition (another opinion) 305

◆

SLUM

During the past week no additional slum clearance schemes have been submitted by local authorities to the Minister of Health, as required by the Minister's five-year plan, set out in circular 1331. Fifty-three schemes have, so far, been received from a total of 1717 housing authorities in the country. The latest date for submission of schemes is September 30.

MR. P. D. HEPWORTH

We are sorry to learn that Mr. P. D. Hepworth, F.R.I.B.A., was recently involved in a motoring accident at Melton. His car overturned and he was taken to Melton Hospital, where he was detained for a fortnight, suffering from slight concussion and two fractured ribs. He is now at home and is said to be progressing satisfactorily.

THE L.C.C. AND RE-HOUSING

It is understood that members of the Housing Committee of the L.C.C. are to visit a number of continental cities next month to obtain ideas for re-housing the people who will be displaced by the proposed clearance. Mr. H. R. Selley, M.P., Chairman of the Committee, stated (according to a contemporary) that the object of the visit was to investigate methods employed on the Continent to re-house people in overcrowded districts. " Our main problem," he said, " is housing in dockside areas. In Paris and Berlin they have erected blocks of fourteen-storey flats. Flats may solve our problem, but we shall not exceed ten storeys."

REGULARIZE EMPLOYMENT

The great campaign of the Special Committee for Public Relations of the Building Industries National Council for the regularization of employment in the building and construction industry has two main aspects :—

1 : The regularization of employment over a period, with planned expenditure mitigating the recurrence of boom and depression with its consequent cycle of over-expansion and unemployment.

2 : The regularization of employment in the short period by the development of every possible means of combating seasonal fluctuations.

This campaign will shortly enter a new phase of intensive effort. Prepare the way by building up a fund now.

Cheques for subscriptions should be made payable to " The Special Committee for Public Relations," and should be addressed to the Hon. Treasurer, at 5 Duke Street, Adelphi, W.C.2.

HOLBORN UNDERGROUND STATION

The work on the reconstruction of Holborn Underground Station, which began in the latter part of 1930, will be completed at the end of this month. The work has cost approximately £500,000.

HOUSING PROGRESS IN MANCHESTER

In the annual report of the City Treasurer on housing schemes, just issued, it is pointed out that during the year ended March 31, 1933, 1,200 houses were built by the Manchester Corporation, and by private enterprise, with the assistance of the Corporation, at a capital cost of £923,628.

The Corporation has now erected a total of 17,392 houses, and assisted private builders to erect 6,284, making a total of 23,676.

Commenting on the magnitude of the housing activities of the city since the war, the report says : " Assuming that each house (built under these Acts) is occupied by one family only, and that the family consists of four persons, it will be seen that accommodation has been provided for no fewer than 94,704 persons. If the various housing estates were grouped together they would form a community much greater than that of any of the municipal boroughs in Lancashire or Cheshire, and greater than that of the county boroughs of Bury, Southport, Warrington, or Wigan, according to the 1931 census figures. The total capital outlay on schemes undertaken with and without Government assistance is now £13,464,533. of which nearly £12,000,000 has gone to the provision of houses, £454,450 in subsidies to builders, and £1,062,503 in loans to builders and others."

THE ELECTRICITY GRID COMPLETED

On Tuesday the last pylon of the Central Electricity Board's national transmission scheme was finished at Fordingbridge, on the borders of the New Forest. This completes the electricity grid, a 5½ years scheme that has cost £27,000,000 and given employment, directly or indirectly, to 200,000 workers. There are 26,265 pylons altogether, mostly from 70 to 80 ft. in height, though some are much greater ; notably those linking up the grid south of the Thames with Dagenham, which are 487 ft. high and weigh 290 tons each—the largest of their type in the world.

The whole system will be working before the end of 1934 ; loaded at first, it is estimated, to the extent of 70 per cent. and by 1940 to their full extent of 25,000,000,000 units.

L.C.C. TOWN PLANNING COMMITTEE

When Major Hardy-Syms takes up his duties on September 25 as the Technical Adviser to the Greater London Regional Planning Committee, he will find on the staff of the Town Planning Committee at the County Hall, several men with expert knowledge of trams. These are officials who worked in the Highways Department, but were found to be superfluous when the L.C.C. tramways were handed over to the London Transport Board. The order made by the Ministry of Health under the Town and Country Planning Act, 1932, which came into force on April 1, 1933, has, however, greatly increased the work of the Town Planning Committee, and these officers have therefore been transferred from highways to town planning.

TOWN AND COUNTRY PLANNING SUMMER SCHOOL

Following are the arrangements for the Town and Country Planning Summer School, to be held at Digswell Park Conference House, near Welwyn Garden City, from September 11 to 17 inclusive, under the chairmanship of Sir Raymond Unwin, PP.R.I.B.A.

MONDAY, SEPTEMBER 11 : 6 p.m. : Registration. 8.30 p.m. Informal discussion of arrangements.

TUESDAY, SEPTEMBER 12 : 10 a.m. : Tour of Welwyn Garden City and study of its plan. 2.30 p.m. : (*Chairman :* Sir Raymond Unwin.) Lecture : " Town and Country Planning," by Mr. G. L. Pepler. *Leader of Discussion :* Mr. John Dower.

5.30 p.m.: Discussion Class on subject to be selected. 8.30 p.m.: (*Chairman:* Sir Theodore Chambers, K.B.E.) Lecture: "The Planning of New Communities," by Mr. Arthur W. Kenyon. *Leader of Discussion:* Mr. Barry Parker.

WEDNESDAY, SEPTEMBER 13: 10 a.m.: Discussion class: "Zoning for Industrial and Commercial Uses." *Leader:* Mr. James W. R. Adams. 2.30 p.m.: Tour of Industrial and Commercial Areas. 5.30 p.m.: Discussion class: "Design of Business Streets and Commercial Areas." 8.30 p.m.: (*Chairman:* Dr. I. G. Gibbon, C.B.) Lecture: "Planning for Industry and Commerce," by Mr. F. J. Osborn. *Leader of Discussion:* Mr. W. R. Davidge.

THURSDAY, SEPTEMBER 14: 10 a.m.: Discussion class: "Zoning for Residence." *Leader:* Miss J. Abram. 11.30 a.m.: Discussion class: "Design of Residential Streets and Areas." *Leader:* Mr. Edward Unwin. 2.30 p.m.: Tour of Housing. 5.30 p.m.: Discussion class: "Urbanism and Rusticism." *Leader:* Mr. Thomas Sharp. 8.30 p.m.: (*Chairman:* Dr. Thomas Adams.) Lecture: "The Housing Problem," by Capt. R. L. Reiss. *Leader of Discussion:* Mr. Frank Hunt, C.V.O.

FRIDAY, SEPTEMBER 15: 10 a.m.: Discussion class: "Regulation of Height, Design and External Appearance of Buildings." *Leader:* Mr. T. F. Thomson. 11.30 a.m.: Discussion class: "Control of Outdoor Advertising." *Leader:* Mr. Basil Marriott. 2.30 p.m.: (*Chairman:* The Rt. Hon. Viscount Gage.) Lecture: "Country Planning," by Mr. W. Harding Thompson. *Leader of Discussion:* Mr. F. Longstreth Thompson. 6 p.m.: Registration of Week-end Members. 8.30 p.m.: Formal opening Session of Week-end Conference at the Cherry Tree Hotel, Welwyn Garden City (open to the public). (*Chairman:* Sir Raymond Unwin.) *Speakers:* Sir Ernest D. Simon; Mr. E. G. Sarsfield Hall, C.M.G.; Sir Theodore Chambers, K.B.E.

SATURDAY, SEPTEMBER 16: 10 a.m.: (*Chairman:* The Rt. Hon. Sir Leslie Scott, K.C.) Addresses: (*a*) "Planning of Urban Areas," by Dr. Thomas Adams. (*b*) "Location of Industry and Commerce, and its bearing on Transportation," by Mr. W. H. Gaunt, O.B.E. *Leader of Discussion:* Major L. Roseveare, O.B.E. 1.30 p.m.: (*Chairman:* Mr. G. Marlow Reed, J.P.) Discussion: "Parks and Other Open Spaces." 3 p.m.: Visit to Hitchin and Letchworth. 8.30 p.m.: Entertainment: Mock Appeal to Court of Summary Jurisdiction under Section 12 (1) of the Town and Country Planning Act, 1932.

SUNDAY, SEPTEMBER 17: 10.30 a.m.: Visit to L.C.C. Watling Estate and Hampstead Garden Suburb. 2.30 p.m.: (*Chairman:* Mr. G. L. Pepler.) (*a*) Address: "Problems of Administration under the 1932 Act" by Mr. J. J. Clarke. (*b*) Address: "Landscape Architecture and Town Planning," by Mr. E. Prentice Mawson. 8.30 p.m.: Addresses on Town Planning Abroad, including: "Town Planning in India," by Mr. Reginald Dann and "Town and Regional Planning in Russia," by Mr. E. Kaufmann.

Two photographs of Ragdale Old Hall, near Leicester, now being demolished and the materials offered for sale.

BUILDING PROGRESS IN NEWFOUNDLAND

The following comparative statement of expenditure on building operations in Newfoundland during the past three years is taken from a report by Mr. H. F. Gurney, entitled *Economic Conditions in Newfoundland*, just issued by the Department of Overseas Trade:

	1930	1931	1932
	$	$	$
Dwellings	254,000	292,175	330,900
Sheds, workshops, etc.	40,000	16,010	63,000
Garages	16,275	11,775	14,220
Churches, schools, etc.	78,000	65,000	2,300
Business premises	132,000	216,000	52,000
	520,275	600,960	462,420

WARWICK GAOL

The Warwick County Gaol, built some seventy years ago, at a cost of £75,000, is to be demolished. The site is to be used for the erection of 120 small villas.

COTTAGE AS AN AUSTRALIAN MEMORIAL

A start was made last week on the task of taking down Captain Cook's cottage at Great Ayton, near Middlesbrough, for the purpose of shipment to Australia, where it is to be re-erected as a memorial to the explorer. The work is being carried out under the supervision of Mr. J. H. Rutherford, F.R.I.B.A.

CAMBERWELL TOWN HALL

Work on the new Camberwell Town Hall, estimated to cost £70,000, is expected to commence early in October.

HOUSING EXHIBITION AT LIVERPOOL

An exhibition of Liverpool housing scheme designs was opened at the Central Lending Library, Liverpool, on September 1.

A NEW CHURCH AT KENNINGTON

St. Anselm's Church, Kennington Cross, S.E., will be consecrated by the Bishop of Southwark on Saturday, September 16. A perspective drawing of the new building, designed by Messrs. Adshead and Ramsey, was exhibited in this year's Royal Academy.

D.I.A. VISIT TO HOLLAND

Arrangements have now been concluded for the Design and Industries Association's week-end visit to Holland. The programme is as follows: Friday, Sept. 22—6.10 p.m. Leave Victoria Station; 7.10 p.m. Leave Gravesend Pier. Saturday, Sept. 23—In Amsterdam; Sunday, Sept. 24—Day excursion to Hilversum, lunch at Abcoude. Monday, Sept. 25—By motor to Haarlem and Rotterdam; 7 p.m. Leave Rotterdam. Tuesday, Sept. 26—8.30 a.m. Arrive Gravesend; 10.13 a.m. Arrive Victoria Station. The inclusive cost of the week-end (with the exception only of dinner, which has been omitted to leave members free to make their own plans for the evenings), 2nd class return tickets, hotel charges, excursions, tips, etc., will be £7 15s. od. (1st class boat return supplement, £1 10s. od.).

SLUM CLEARANCE AT LIVERPOOL

The Liverpool Housing Committee has approved a ten-year programme of slum clearance.

The scheme, which is estimated to cost £7,730,890, provides for the demolition of 12,742 houses scheduled as insanitary by the medical officer of health, the consequent displacement of 63,710 people, and the erection of 15,692 new dwellings.

Of these 5,000 will be houses built on the outskirts, on sites already in possession of the Corporation, which will be appropriated for housing purposes, or on cleared sites acquired under compulsory purchase orders. Three types are proposed. There will be 1,750 at £365 each, 2,750 at £380 each, and 500 at £440 each, and the total cost for houses will be £1,903,750.

The remainder of the scheme provides for tenements for the inner areas, on sites to be cleared and purchased under compulsory orders, and adjacent sites. The total proposed under the new ten-year scheme is 10,692 tenements.

BRITISH INDUSTRIES FAIR

Although the British Industries Fair does not open until February 19, the Department of Overseas Trade reports that it has already received applications for more than 90 per cent. of the space occupied by exhibitors at Olympia and in the Furniture Section at the White City at the last Fair. In the "heavy industries" section, at Birmingham, advance bookings of space by exhibitors are so far ahead of those last year, or indeed, in any previous year, that some 55,000 square feet of indoor area are being added immediately to meet pressing demands.

ARCHITECTURAL CONTROL IN THE PEAK DISTRICT

The architectural panel in the Peak District has recently agreed to advise on a proposed housing scheme at Hope that is to be carried out by a firm of cement manufacturers. The original designs were considered to be unsatisfactory, and both layout and elevations were redrafted. The new drawings were accepted without demur. This is a typical example of the work which an architectural panel can accomplish in cases where there was no possibility of an architect being employed.

NEWS CINEMA FOR LIVERPOOL

The Liverpool magistrates have approved plans for a "news" cinema, which is to be built in Williamson Street, Liverpool. The approval was given on the understanding that "there must be no queues and no waiting in the foyer."

EXHIBITIONS

Today, at 3 o'clock, Sir William Crawford, K.B.E., will open an exhibition of modern industrial photography at the Royal Institute (Princes) Galleries, Piccadilly, W.

The seventy-eighth annual international exhibition of the Royal Photographic Society will be held at the Society's Galleries, 35 Russell Square, W.C.1, from Saturday, September 9, to Saturday, October 7. The Exhibition will be open daily (Sundays excepted) from 10 a.m. to 9 p.m., except on Tuesdays and Fridays, when it will close at 6 p.m. Lectures will be given on those evenings.

PUBLIC LIGHTING CONFERENCE

The tenth annual conference of the Association of Public Lighting Engineers was held at Margate from September 4-6. On Monday last the delegates were entertained by the Mayor of Margate (Ald. F. L. Pettman, J.P.) and the Mayoress, and on the following day the Mayor opened the Conference. Following an address by the President, Mr. E. M. Severn (London), Mr. A. V. Emptage, Public Lighting Superintendent of Margate, described the lighting of the town and Mr. W. N. C. Clinch, Brighton's electrical engineer, read a paper on "The Lighting of Seaside and Health Resorts."

On Tuesday a paper was read by Mr. G. H. Wilson on "Electric discharge lamps and their applications to Public Lighting."

On Wednesday (yesterday) the following papers were read: "Street Lighting in the Irish Free State," by Mr. F. X. Algar; "Public Lighting of Paris," by Mr. J. W. Partridge (Chief Engineer in charge of street lighting, Paris); and "Public Lighting of Bombay," by Mr. J. P. Blackmore.

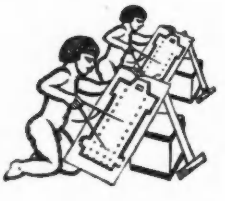
CHANGE OF ADDRESS

Mr. A. O. Chatterley, B.ARCH., A.R.I.B.A., has changed his Birmingham business address to 41 Water Street, Birmingham, 3. Telephone No: Central 8184.

ARCHITECT'S WILL

Mr. C. Kempson, F.R.I.B.A., of Leicester, left £19,641 (net personalty £17,457).

COMPETITION



NEWS

BEXHILL ENTERTAINMENTS HALL

It is announced this week that conditions for the above competition are now obtainable. For details see *Competitions Open* below.

Competitions Open

September 11.—Sending-in Day. The Directors of Gidea Park, Ltd., invite designs for five different types of house (ranging from £400 to £900). Assessors: Prof. S. D. Adshead, F.R.I.B.A., A. E. Beresford, F.R.I.B.A., Ald. Ewart G. Culpin, F.R.I.B.A., E. Maxwell Fry, A.R.I.B.A., Howard Robertson, F.R.I.B.A., and W. Harding Thompson, F.R.I.B.A. In addition to being paid a fee according to the scale of charges of the R.I.B.A., the authors of the first five selected designs in each class will be paid a premium of £10. Particulars obtainable from Gidea Park, Ltd., The Estate Office, Hare Street, Gidea Park, Romford, Essex. Deposit 5s.

September 21.—Sending-in Day. Proposed Town Hall for the Borough of Hornsey. Assessor: C. Cowles-Voysey, F.R.I.B.A. Premiums: £350, £250 and £150. Full conditions, etc., were published in our issue for May 17.

September 30.—Competition for speculative house designs, organized by the Architectural Association with the co-operation of Messrs. J. Laing and Sons, Ltd. Three types of house are required. Assessors: C. Lovett Gill, F.R.I.B.A.; L. H. Bucknell, F.R.I.B.A.; J. R. Leathart, F.R.I.B.A.; Arthur W. Kenyon, F.R.I.B.A.; T. Alwyn Lloyd, F.R.I.B.A.; and J. W. Laing. Premiums: £25 for the design placed first in each group. Copies of the conditions are being issued free, on application, to all members of the Architectural Association, and members of the R.I.B.A. can obtain copies (price 2s. 6d.) from Mr. F. R. Yerbury, General Secretary, The Architectural Association, 34-36, Bedford Square, W.C.1. Full particulars of the competition were published in *A.J.* for July 27.

December 4.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor: Thomas S. Tait, F.R.I.B.A. Premiums: £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Proposed extensions to the Town Hall, Swindon. Assessor: Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere A.R.I.B.A. Conditions are now being drawn up by the assessor.

Decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas.

Conditions governing the competition, which closes on December 15, 1933, will be issued on September 30 next.

Proposed town hall and municipal buildings, Stoke Newington. Assessor: Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

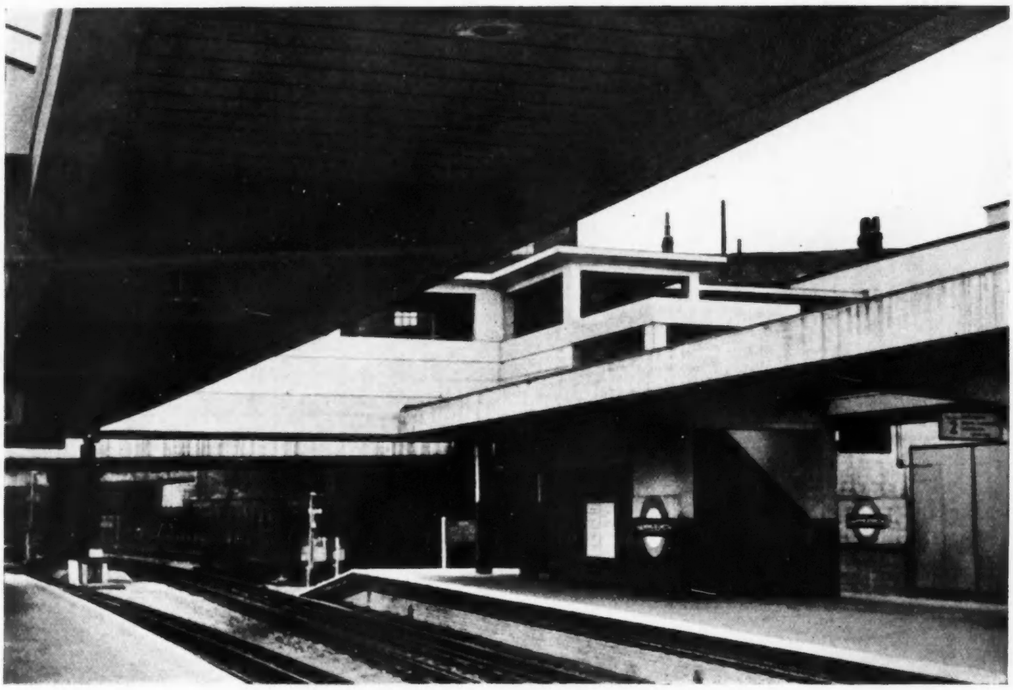
THIS ARSHETECTURE

We have done our utmost to prevent the new Battersea Power Station being a blot on the landscape. And in building a power station which is architecturally dignified and ornamental, we have also endeavoured to combine, as far as possible, every known economy.

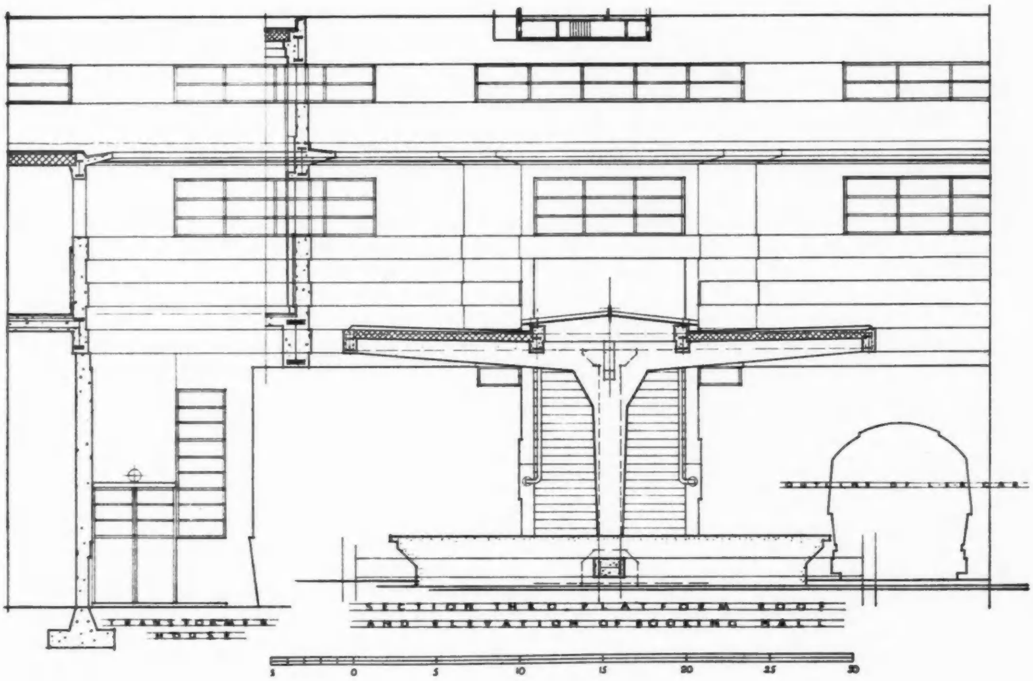
He (Sir Francis) also spoke of the architectural features of the station, and of an attractiveness perhaps unlooked for until one remembers that the architect of the building is Sir Gilbert Scott.

[*From an interview with Sir Francis Fladgate, the Chairman of the London Power Company, published in* THE OBSERVER *for August 27.*]

HAMMERSMITH STATION



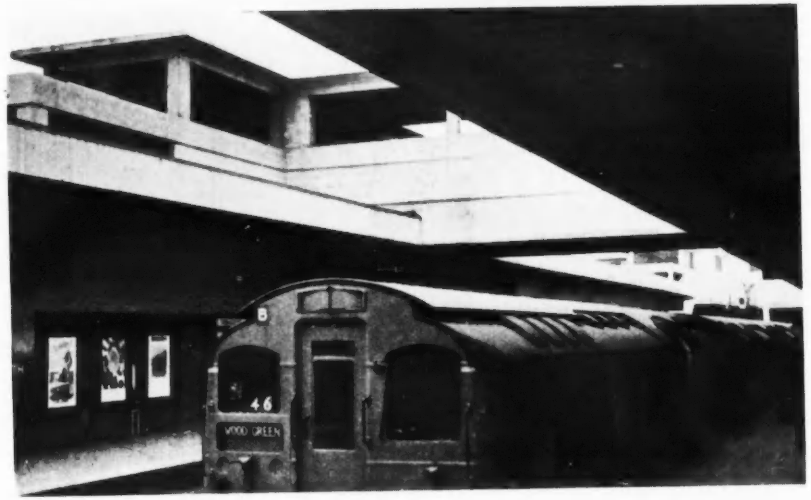
A photograph of the platforms and footbridge; and a section through the platform roof showing the booking hall in elevation and the transformer house.

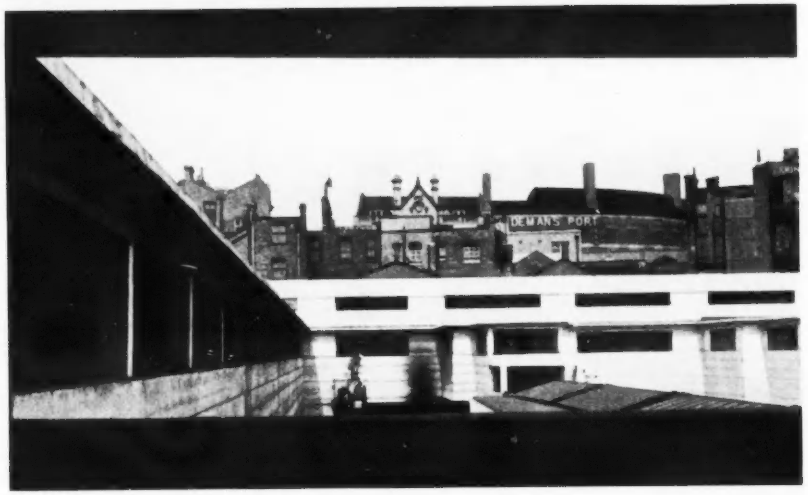

TRANSFORMER HOUSE
SECTION THRO' PLATFORM ROOF AND ELEVATION OF BOOKING HALL
5
0
5
10
15
20
25
30

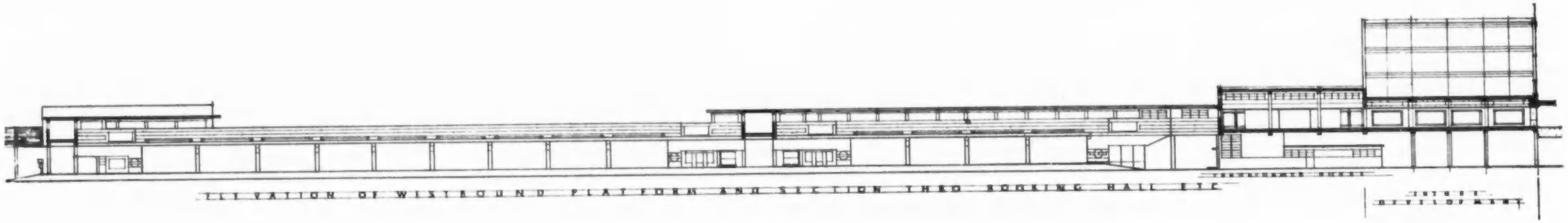
RECONSTRUCTED BY S. A. HEAP

(*Architect to the London Passenger Transport Board*)

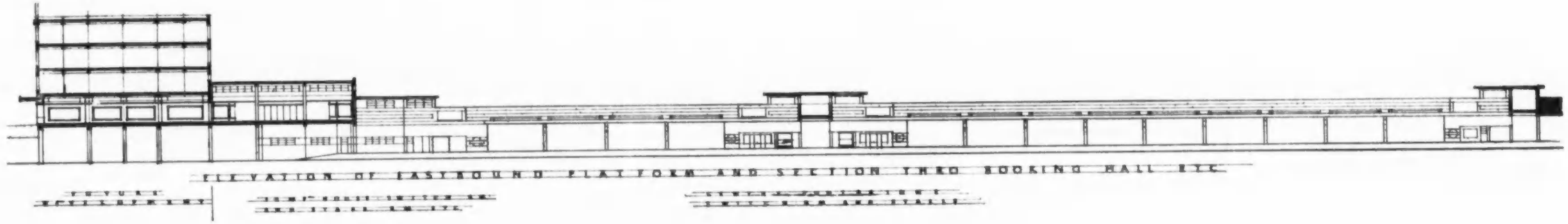
HAMMERSMITH UNDERGROUND STATION


B
46
WOOD GREEN

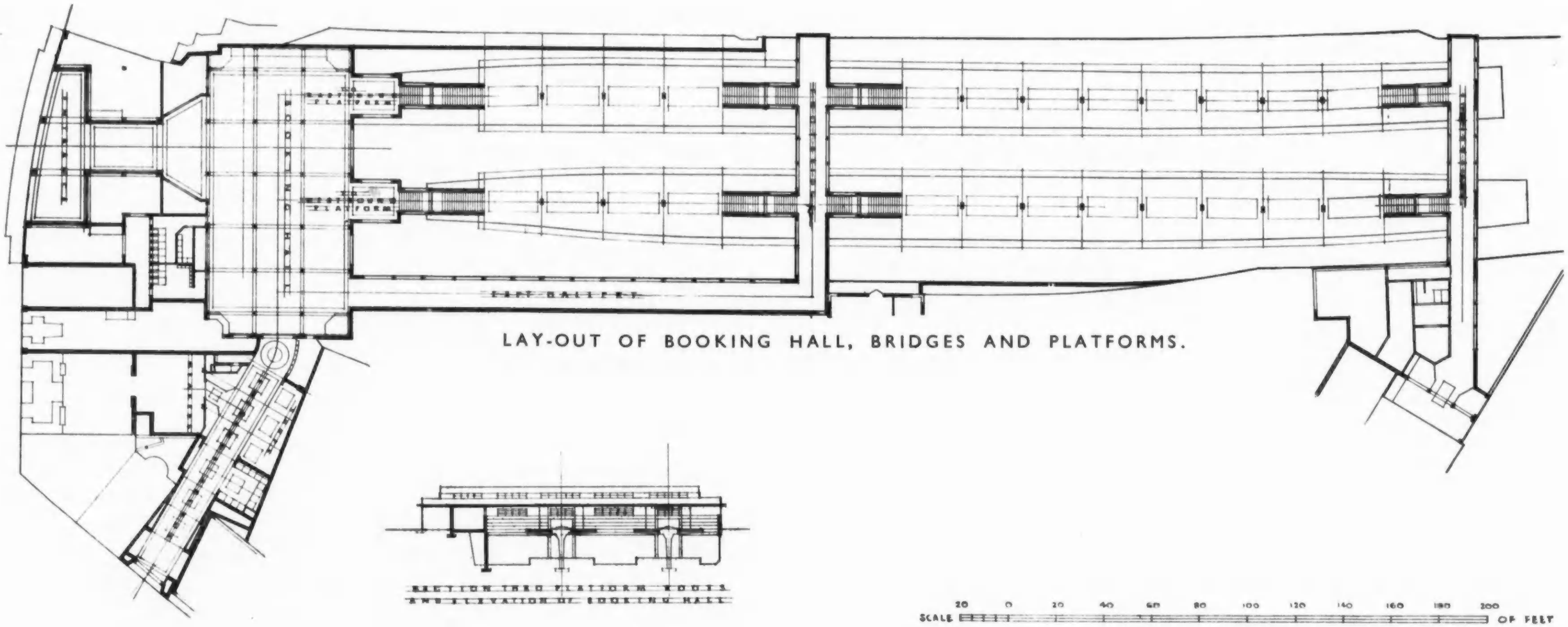

DEMANS PORT


FUTURE DEVELOPMENT

ELEVATION OF WESTBOUND PLATFORM AND SECTION THRO BOOKING HALL ETC.


FUTURE DEVELOPMENT

ELEVATION OF EASTBOUND PLATFORM AND SECTION THRO BOOKING HALL ETC.


TO EASTBOUND PLATFORM
TO WESTBOUND PLATFORM
BOOKING HALL
EXIT GALLERY
SECTION THRO PLATFORM ROOFS AND ELEVATION OF BOOKING HALL
SCALE
20
0
20
40
60
80
100
120
140
160
180
200
OF FEET

LAY-OUT OF BOOKING HALL, BRIDGES AND PLATFORMS.

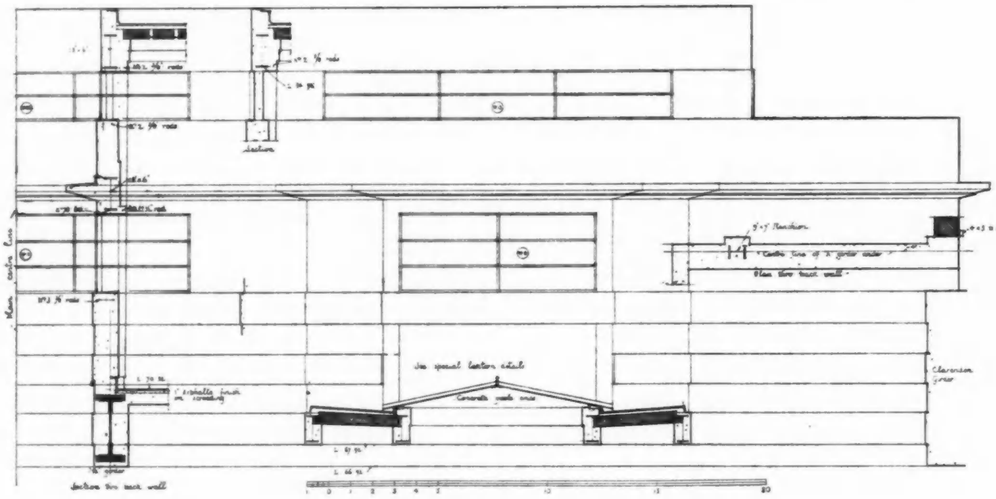
The work of reconstructing the Hammersmith Underground Station had to be undertaken in a number of stages that would not interfere with the normal running of the station. The platforms, staircases, etc., which are here illustrated, are now completed, the new booking hall and the Queen Street entrance are under construction, and the reconstruction of the Broadway front will follow.

The construction is almost entirely in steel with concrete casing. The use of reinforced concrete was precluded by the importance of not interfering with traffic by props and centering. The steel beams, generally, were encased first in ordinary concrete, wrapped in patent lathing, and finally surrounded with a further 2 ins. of special concrete. This concrete has an aggregate of St. Austel granite grit, which is brought to the surface by grinding down. The transformer room under the booking hall is the only portion completely constructed in reinforced concrete.

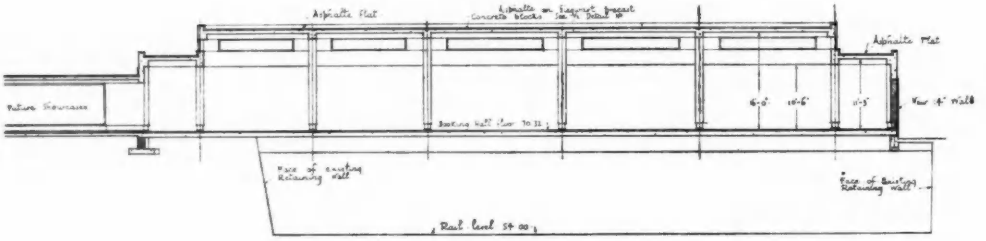
The roofing throughout is of pre-cast slabs, cast to a sand-faced finish on the soffit and painted with one coat. The joints are slightly recessed. The columns on the platforms and staircases are also painted up to a uniform height with one coat, giving a slightly porous finish. The poster surrounds on the exit footbridge are in red and black tiles.

RECONSTRUCTED BY S. A. HEAPS (Architect to the London Passenger Transport Board)

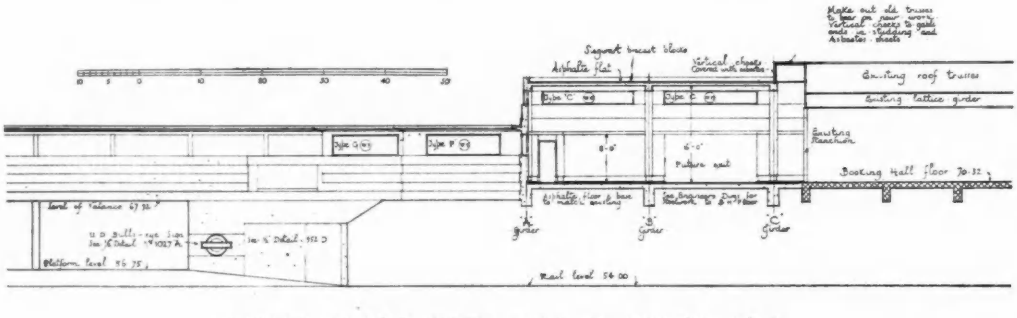
HAMMERSMITH STATION


Plan centre line
Section
Section thro back wall
Plan thro back wall
Centre line of 'A' girder under
See special lantern detail
Concrete roof slab
Asphalte finish on screeding
Clarendon Girder
0 1 2 3 4 5 10 15 20

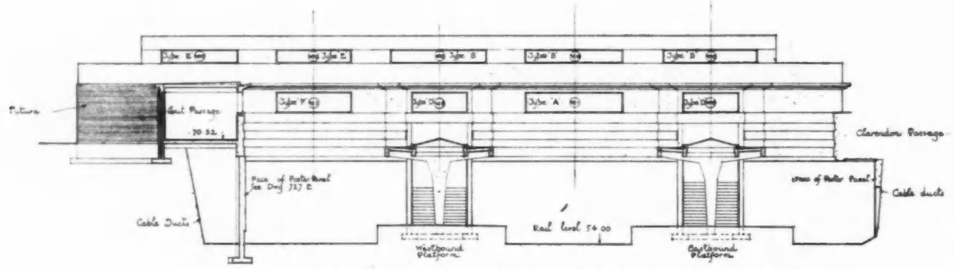
DETAIL OF BOOKING HALL


Asphalte flat
Asphalte on Siegwart precast Concrete blocks See ½ Detail
Asphalte flat
Future Showcases
Booking Hall floor 70.32
6'-0"
10'-6"
11'-5"
New 4" Wall
Face of existing Retaining Wall
Face of Existing Retaining Wall
Rail level 54.00

CROSS SECTION THRO' BOOKING HALL ON LINE A-A


Make out old trusses to bear on new work. Vertical cheeks to gable ends in studding and Asbestos sheets
Siegwart precast blocks
Asphalte flat
Vertical cheeks Covered with asbestos
Existing roof trusses
Existing lattice girder
Type 'C'
Type C
8'-0"
6'-0"
Future exit
Existing Stanchion
Booking Hall floor 70.32
Asphalte floor & base to match existing
See Engineers Dwgs for Steelwork to B.H. Floor
'A' Girder
'B' Girder
'C' Girder
Type G
Type F
Level of Valance 67.92
Platform level 56.75
Rail level 54.00
10 5 0 10 20 30 40 50

SECTION ON MAIN CENTRE LINE OF BOOKING HALL


Type E
Type E
Type B
Type B
Type B
Type F
Type D
Type A
Type D
Future
Exit Passage
70.32
Clarendon Passage
Face of Poster Panel See Dwg 727 E
Face of Poster Panel
Cable Ducts
Cable ducts
Rail level 54.00
Westbound Platform
Eastbound Platform

ELEVATIONS OF BOOKING HALL FROM PLATFORMS

RECONSTRUCTED BY S. A. HEAPS

LETTERS FROM READERS

AN AMERICAN IN ENGLAND

V. E.

B. M. AMBY

The Frustrated Schoolmaster—

The Reviewer Replies

Sir,—Your correspondent, Mr. D. G. Denoon, who objects to my review of *English Church Monuments*, makes one point in his letter in your issue for August 24, with which I heartily agree. He says: "but then, I never could understand the American language."

Unless my grasp of English is as poor as his command of American, I understand that he accuses me of wanting to burn the effigies in the churches because the modern artist doesn't appreciate them.

Let me set his mind at rest. The modern artist is the only person who *does* appreciate the effigies—witness Mr. Eric Kennington's letter in your issue for August 31. My argument is that nobody else does. Why? Because the "civilized" English world is under the thumb of our friend, the frustrated schoolmaster, who spends his time getting rubbings from brasses and figuring out what sort of codpieces they wore in the time of Ethelred the Unready.

If Mr. Denoon would ask me how books like the ones I have reviewed ought to be written I would tell him. I'll tell him anyway. Compare Mr. Kennington's description of the two Dorchester Knights with any parallel description by the antiquaries. One puts the creative faculties of the reader immediately to work; the other . . . chain-mail from the neck up.

As to what Mr. Kennington tells me about the younger sculptors I am not altogether as blind in that eye as he thinks. But why aren't they at work? Why aren't they employed? I will tell him. It is because the architects are under the thumb of the frustrated schoolmaster too.

You can see a lot of "sculpture" on new buildings from the side walks of London. Most of it isn't worth its weight in waste-paper for the simple reason that it is "produced" by the yard by tradesmen whose craftsmanship is so crazy that they can't even turn out decent replicas of the models they copy, let alone think up a new crack.

Does the architect mind? He likes it. He puts this stuff on his buildings. From which one must conclude that he is either intellectually dishonest, or, as I suspect, simply a dear old frustrated schoolmaster, whose reactions to the visual aspect of things seem rather less dynamic than the posture of that recumbent Knight, who slumbers in the shadows of the village church while the sunlit creeper taps against the vestry door.

AN AMERICAN IN ENGLAND

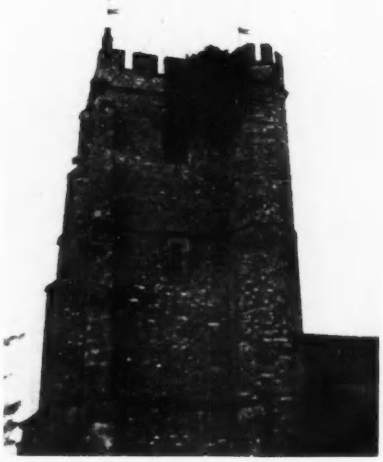
Culmstock Church

Sir,—I never knew, until last month, that there was a church in England with a yew tree growing in its tower. I saw it for the first time while on holiday in Devonshire, and took this photograph of it. It is on the fourteenth-century church at Culmstock.

Mr. R. D. Blackmore in his book *Perlycross* writes of it as being there for a time much longer than human memory and goes on to say "backed as it was by solid stone no storm had succeeded in tugging its tough roots out of the meshes of mortar; and there it stood and meant to stand, a puzzle to gardeners, a pleasure to jackdaws, and the pride of all Perlycrucians. Even Mr. Penniloe, that great improver, could not get a penny towards his grand designs, until he had signed a document with both churchwardens, that happen what might, not a hair of the head of the sacred yew tree should perish."

I wonder whether any of our modern buildings could stand the strain of such a parasite.

V. E.



The tower of Culmstock Church, Devonshire. See letter on this page.

A New Institute

Sir,—It is with much surprise that I read in your JOURNAL that architects are going to have a new institute and they are all going to call themselves M.INST.R.A. I would like to point out that this is going to lead to some misunderstanding.

I am a registered plumber and me and some of my friends are wanting to form a new society to protect us registered plumbers against those who are not registered. This society will be called the Institute of Registered and Incorporated Plumbers and members will be allowed to put after their names the letters M.INST.R.I.P., provided they have paid their half-crown.

B. M. AMBY

TOWN PLANNING

The Irish Free State

The text of the recently introduced Irish Free State Town and Regional Planning Bill has given general satisfaction to Irish architects and builders (writes our Irish correspondent). There may be some points upon which members of the architectural profession will disagree, but these no doubt can be amended to satisfy everybody before the Bill becomes law.

Under the terms of the Bill the various county councils, county borough councils and other local authorities will be permitted to constitute themselves planning authorities for their districts, and at any time two or more of these planning authorities may combine to form a regional planning authority. A district planning authority will be empowered to form and adopt a planning scheme for its own district; and the regional planning authority may devise a scheme for the region or combination of districts. These schemes have an extensive range, and may provide for the regulation of roads, buildings and structures, new and old ; for the preservation of public amenities and for all operations that concern public services.

In regard to buildings and structures the authority may regulate and control any of the following matters : (a) the character, density, height, spacing and frontage line of buildings and other structures ; (b) the design, colours and materials of buildings and other structures ; (c) the extent of the yards, gardens and curtilage of buildings and other structures ; (d) the purposes for and the manner in which structures may be used or occupied ; reserve or allocate any particular land or all land in any particular area for structures of a specified class or classes, or prohibit or restrict either permanently or temporarily the making of any structures or any particular class of structures on any specified land ; provide for the demolition or alteration of structures which are inconsistent with or obstruct the planning scheme.

In regard to amenities the authority may control or limit the purposes for which particular land may be used ; provide for the public parks, recreation grounds or open spaces, whether public or private ; provide for the preservation of lakes, rivers, trees and natural features ; provide for the preservation of objects of archæological or historical interest ; prohibit, restrict or control, either generally or in particular places, the exhibition whether on the ground, on any structure, or in the air of all or any particular forms of visible or audible advertisements. The authority may also declare the persons by whom and the manner in which the cost of the execution of works, whether of construction, demolition, removal or alteration, in pursuance of the planning scheme are to be borne.

The penalty for breach of any provision contained in the Bill is fixed at £25, with further fines for continuing offences. Provision is made for payment of compensation for restriction of use of property, and in various other cases, but there is also provision by which payment to the responsible authority must be made where property has been improved by reason of planning schemes.

Should any dispute arise regarding a planning scheme the Minister for Local Government shall be empowered to hold a public inquiry into it, and determine the rights of the respective parties.

Two New Towns for Essex

The contemplated launching of a scheme of slum clearance by the L.C.C., involving a total capital expenditure of £35,000,000 which is intended to re-house, during ten years, about 250,000 persons, has prompted Mr. Charles Boot, of Messrs. Henry Boot and Sons, Ltd., to produce an alternative scheme, which has been submitted to the Ministry of Health.

His proposal, he suggests, would enable the authorities to re-house 50,000 families in two entirely new satellite communities, and to give those families ample and easy facilities of transport. It would entail the purchase of inexpensive land for the housing areas, and the construction of roads, houses, and sewers at less cost than obtains in city slum clearance schemes. He claims that his scheme would save several million pounds sterling when compared with any other scheme proposed for re-housing the people in the present congested areas, and would also overcome the difficulties of disturbing the people during the creation of the re-housing schemes.

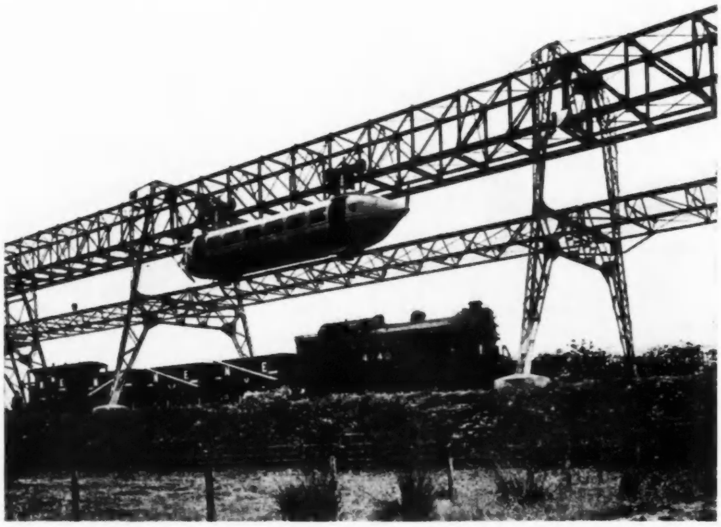
He proposes that two new towns should be built in Essex, one being situated east and south-east of Waltham Abbey, and the other in the vicinity of Dagenham and Becontree. Each town would consist, initially, of about 25,000 houses, accommodating, say, 125,000 people. The scheme, he claims, would therefore re-house about 250,000 people and require a total area of 5,000 acres for the houses, streets, and open spaces. The schemes could be increased with certain advantages to 30,000 houses each. It would be necessary to provide additional acreage for the establishment of local business and factory premises, for the latter would certainly to some extent follow the workers.

The system of transport proposed by Mr. Boot is that of the "railplane," a photograph of which is reproduced on this page. He suggests a double line track between the two towns with single line loops in the towns. The total length of single line would be about 46½ miles. The track would be of lattice girder construction, supported at any designed height above the ground, on steel trestles spaced about 80 ft. apart. Under this system the only ground that would be required for actual occupation, apart from the stations, would be for the concrete pads at the feet of the trestles.

Mr. Boot claims that the cost of establishing the two satellite towns and the "railplane" would be as follows :—

5,000 acres of land at £100 per acre	£500,000
50,000 houses at £275 each . .	13,750,000
Roads, sewers, water, etc (say)	2,500,000
Cost of "railplane" . .	2,700,000
	£19,450,000

This total (£19,450,000) compared with the L.C.C.'s figure (£35,000,000) for re-housing in London, would represent a saving of £15,550,000.



The "railplane" system of transport suggested by Mr. Boot for use with his scheme for new satellite towns in Essex. This photograph shows a similar system in use near Glasgow.

The Late Adolf Loos

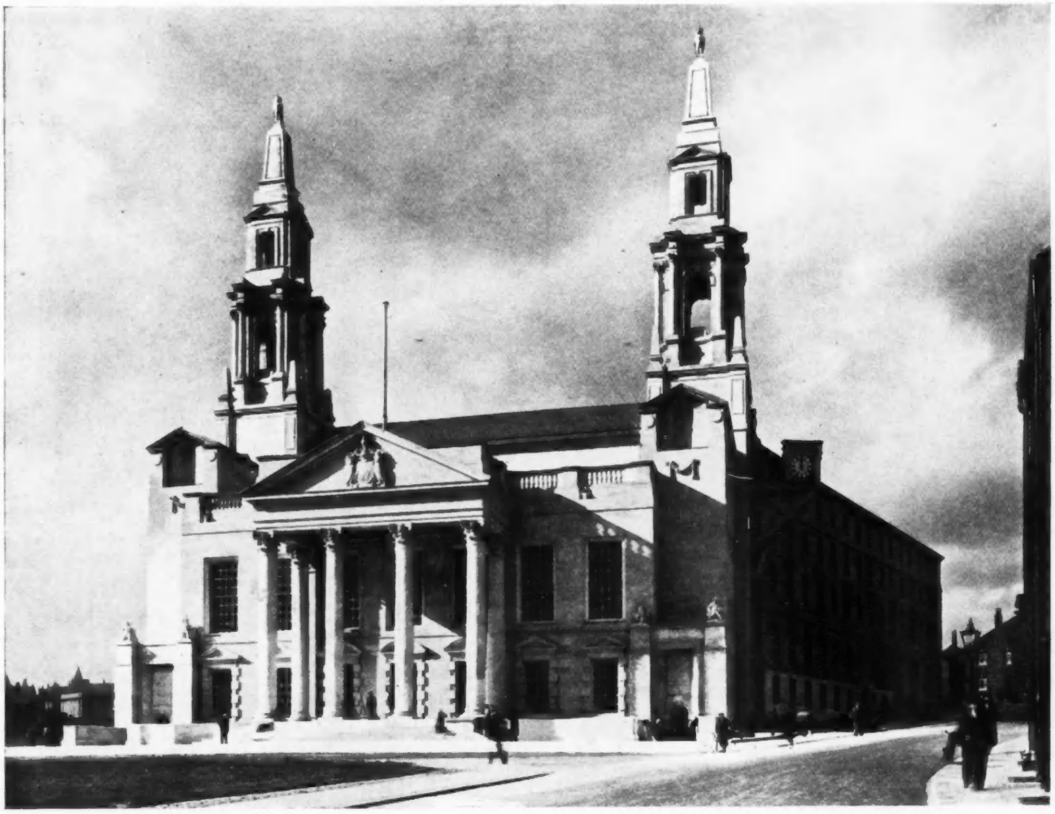
Herr Adolf Loos, the Austrian architect, has died in a Vienna nursing home at the age of 63.

The son of an Austrian sculptor domiciled in Moravia, he studied architecture at Dresden. He spent his early manhood in the United States, whence he returned to become an architectural pioneer in his own country.

Moving a Church

In last week's issue we illustrated the moving of St. Andrew's Church from Wells Street, Oxford Street, to Kingsbury, and gave the name of the architect as Mr. W. A. Forsyth, of Forsyth and Maule. We are asked by Mr. Forsyth to say that he is solely responsible for the work, his partnership with Mr. Maule having been dissolved some years ago.

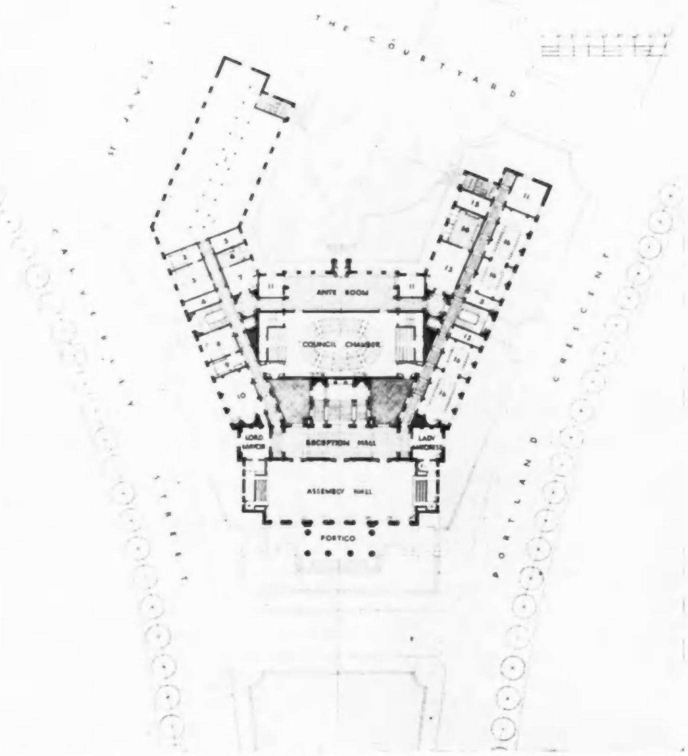
THE CIVIC HALL, LEEDS



Above is the main elevation of the building. It is a steel framed structure, faced with Portland stone and roofed with green Westmorland slates. It stands at the top of a rising approach.

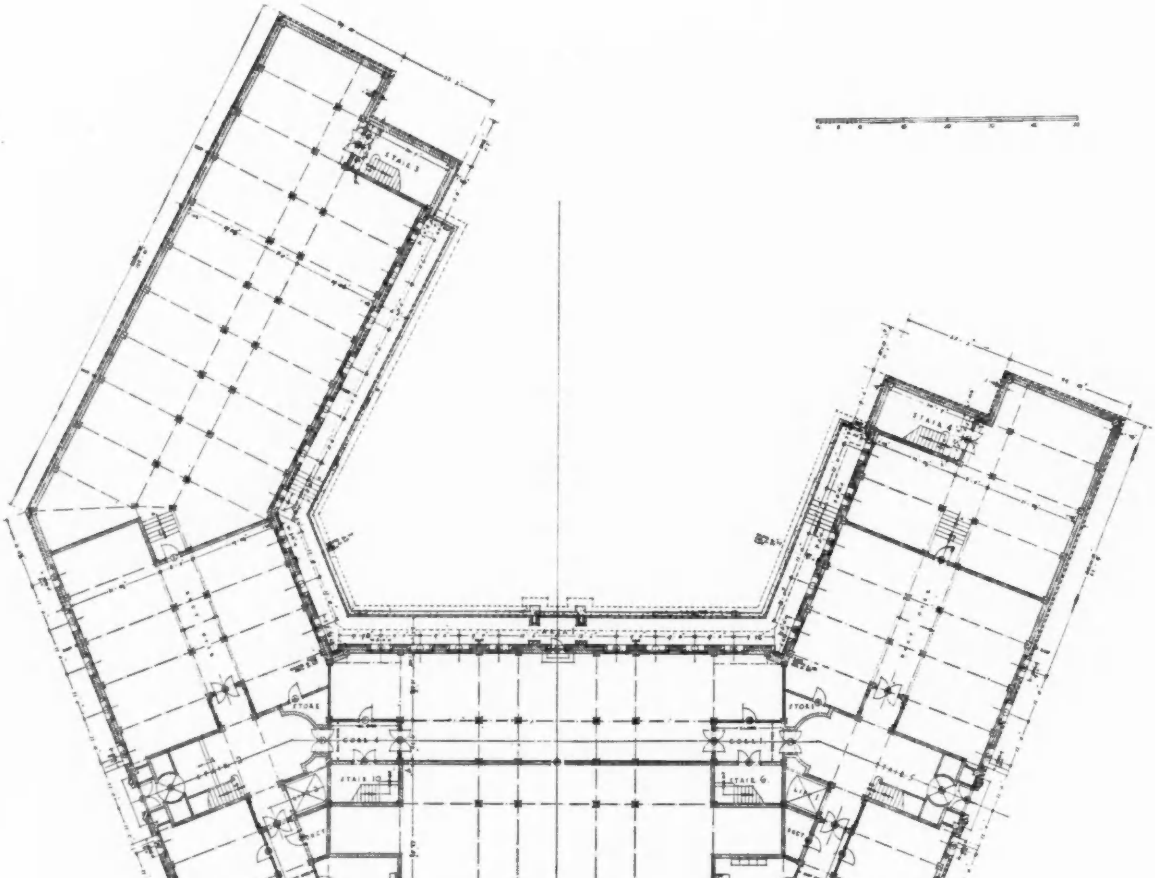
The lay-out plan also shows the planning of the first, or ceremonial, floor. The numbers on the plan refer to rooms as follows :

1 : Town Clerk's Department.
2 : Secretary's Room.
3 : Town Clerk's room.
4 : Ante room.
5 : Waiting Room.
6 : Lady members' lavatory.
7 : Lady members' robing room.
8 : Cloakroom.
9 : Lord Mayor's secretary's room.
10 : Lord Mayor's reception room.
11 : Consultation rooms.
12 : Press.
13 : Members' robing room.
14 : Members' lavatory.
15 : Still room.
16 : Committee room.


THE COURTYARD
CALVERLEY STREET
PORTLAND CRESCENT
ANTE ROOM
COUNCIL CHAMBER
LORD MAYOR
RECEPTION HALL
LADY MAYORESS
ASSEMBLY HALL
PORTICO
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

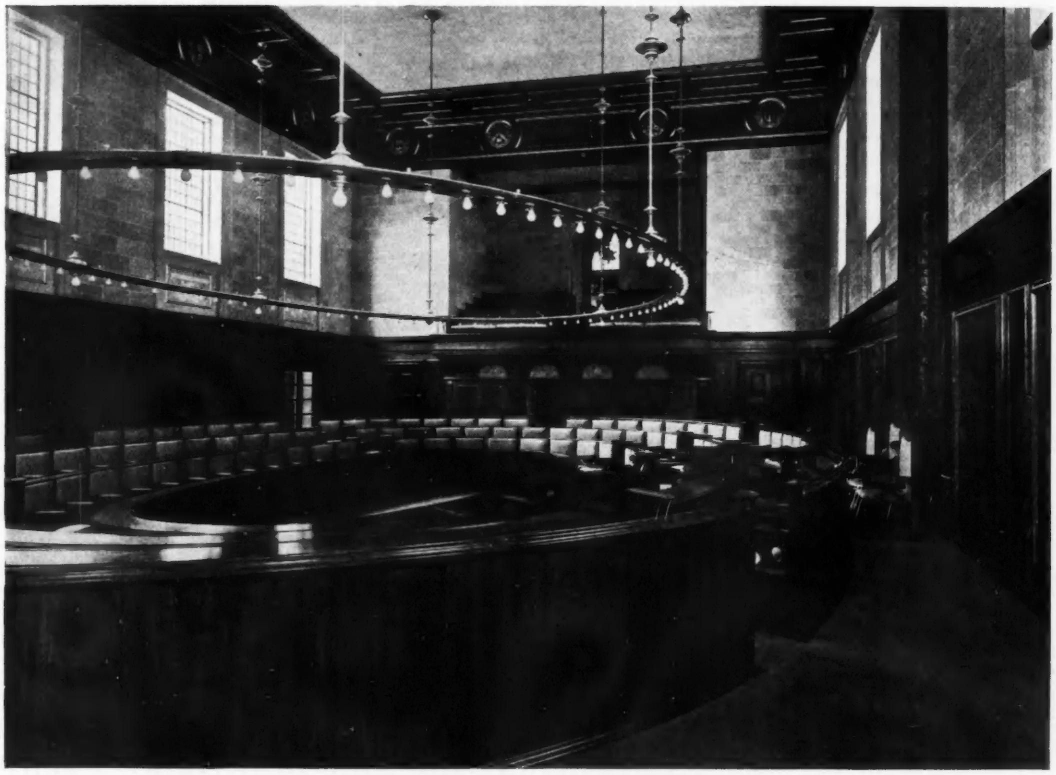
DESIGNED BY E. VINCENT HARRIS

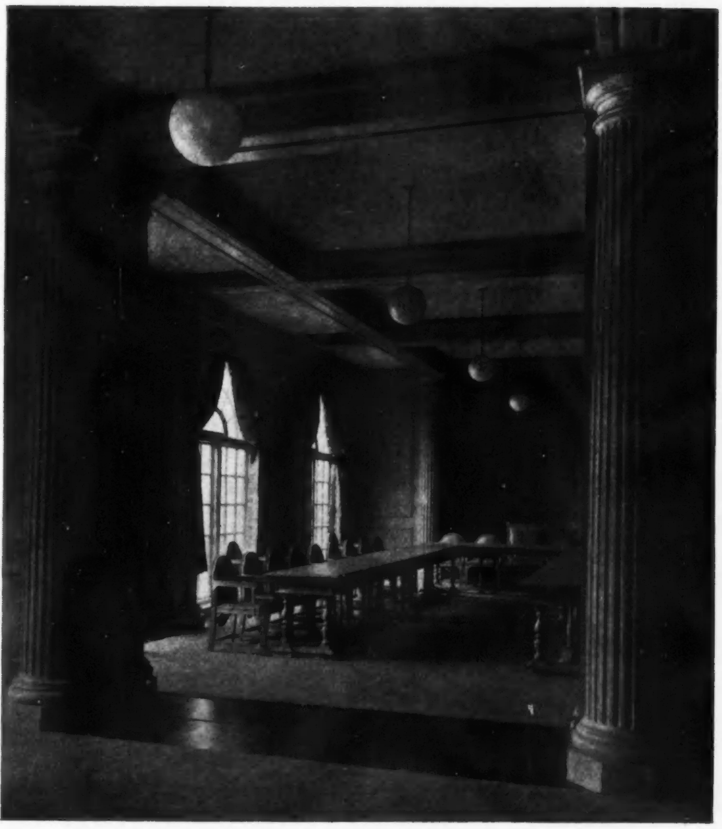
THE CIVIC HALL, LEEDS:


STAIR 3
STAIR 4
STORE
STORE
CORR 4
CORR 1
STAIR 10
STAIR 6
LIFT 1
DUCT
DUCT
LAV
LAV
CORR 3
CORR 2
AREA 3
AREA 2
STAIR 1
STAIR 7
CLOAKS
CLOAKS
ENTRANCE HALL
DUCT
DUCT
LAV
LAV
AREA 4
AREA 6

GROUND FLOOR PLAN

BY E. VINCENT HARRIS

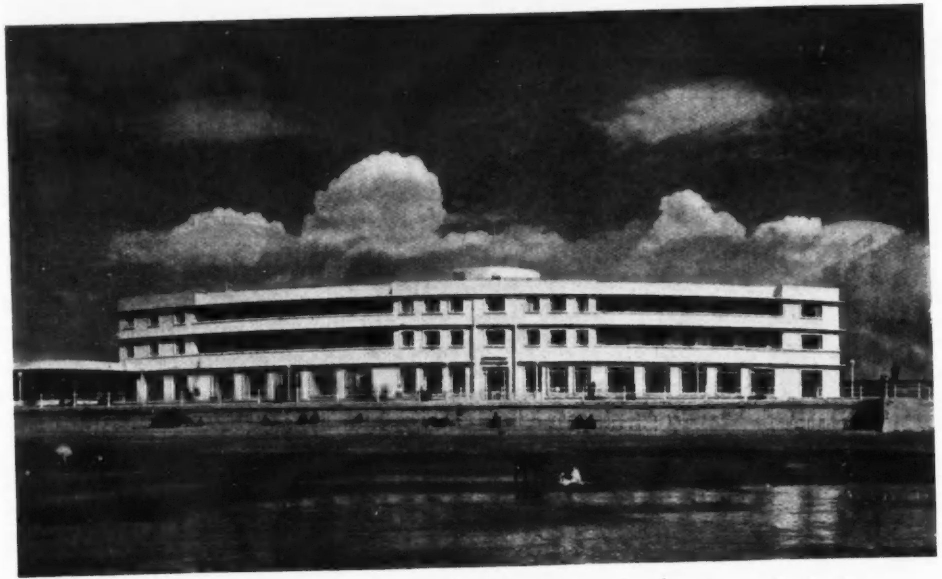




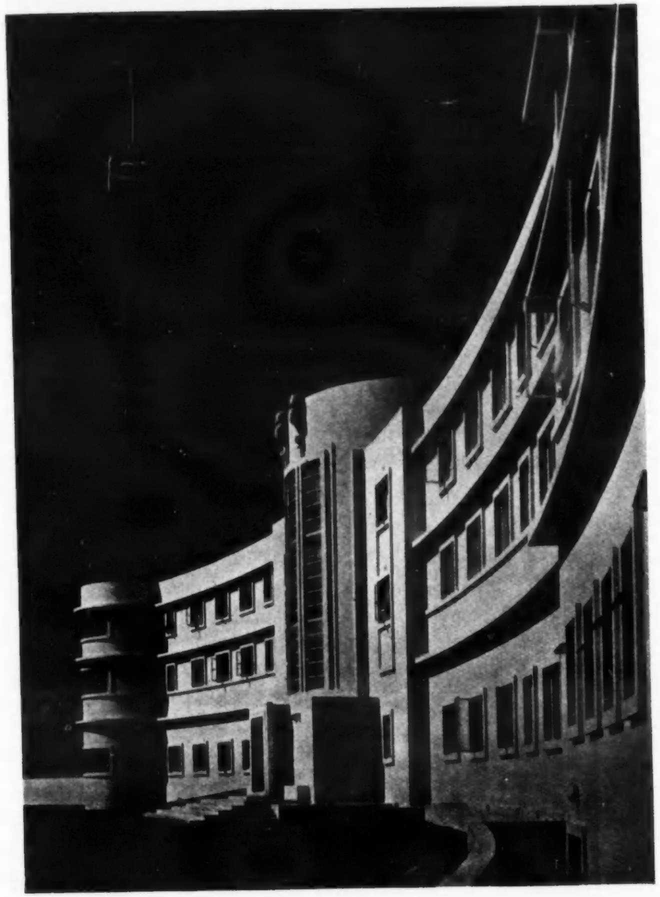
The council chamber (top) and a committee room. The walls of the council chamber are finished with walnut panelling up to door height, and in acoustic tiles above. The frieze is in walnut, decorated with heraldic panels.

In the committee rooms the finishings and furniture are in limed oak, with a beige carpet and blue curtains. There are four committee rooms, grouped in pairs, with sliding doors so that each pair can be thrown into one.

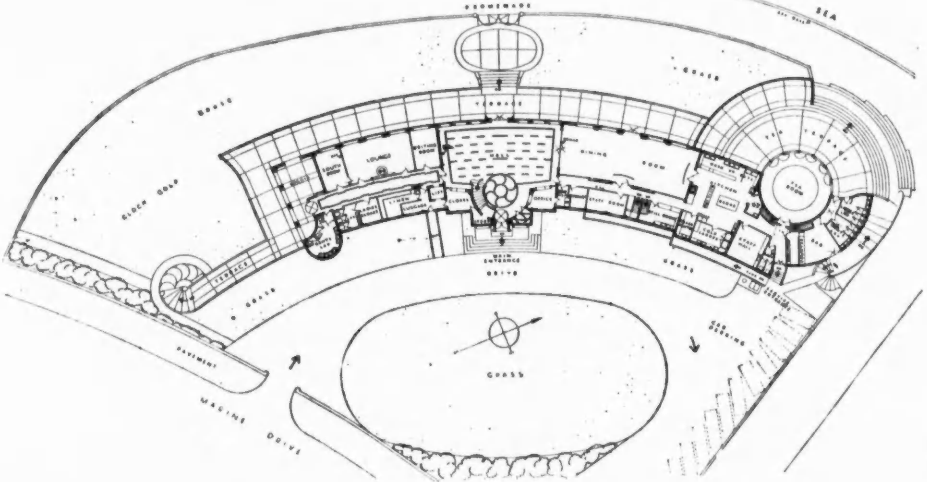
THE MIDLAND HOTEL, MORECAMBE



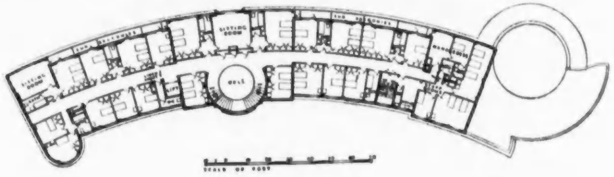
The hotel from the sea.



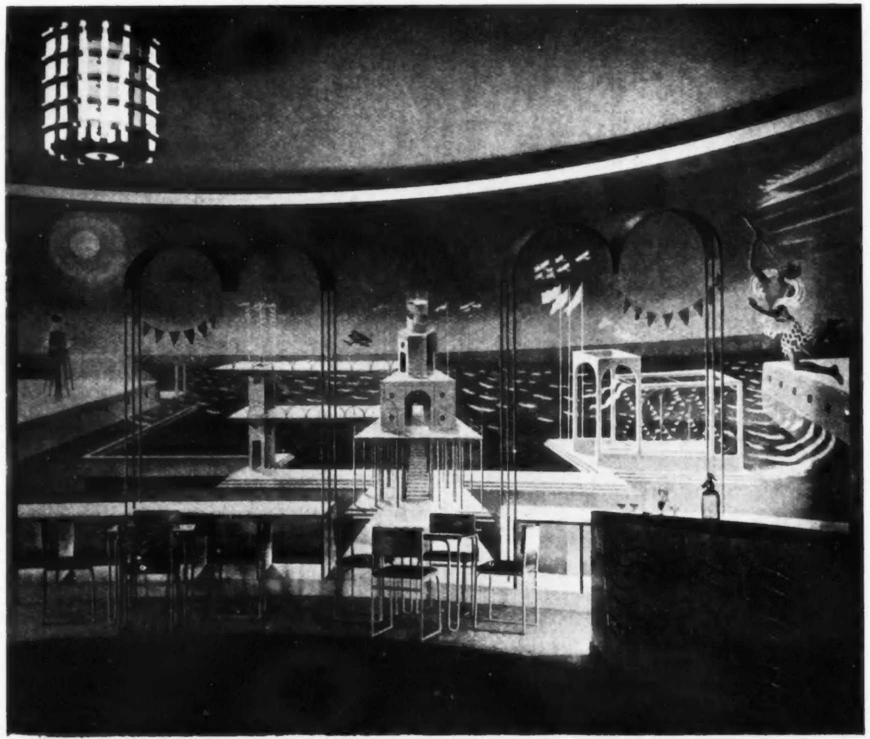
The entrance front.


PROMENADE
SEA
GRASS
BOWLS
CLOCK GOLF
TERRACE
LOUNGE
WRITING ROOM
HALL
DINING ROOM
TEA TERRACE
TEA ROOM
KITCHEN
LUGGAGE
LINEN
LIFT
CLOAKS
OFFICE
STAFF ROOM
STAFF HALL
MAIN ENTRANCE
DRIVE
GRASS
PAVEMENT
MARINE DRIVE
CAR PARKING
SERVICE ENTRANCE

Ground floor plan.


SITTING ROOM
WELL
SCALE OF FEET

Upper floor plan.

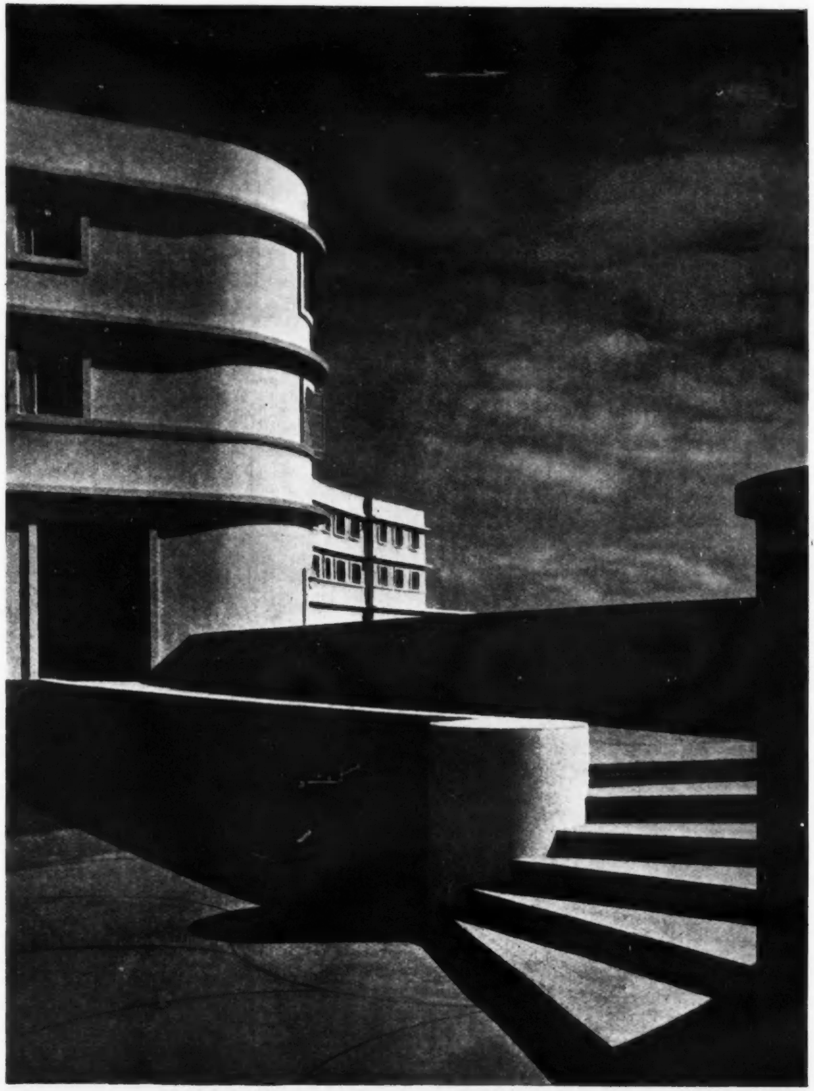


The part entitled "Day" of the wall painting, by Eric Ravilious, in the tea room.

The new L.M.S. Hotel at Morecambe Bay is curved in plan to follow the line of the new sea-wall. The external walls are finished in white cement and carborundum rendering, electrically polished to a fine surface. The architraves to the ground floor windows were precast with an aggregate of crushed blue glass and carborundum, and the soffits of the ledges and balconies and the ceilings of the loggias glazed a bluish green.

Internally the colour-scheme generally is blue white and silver, and the building is embellished with carvings in low relief by Eric Gill and paintings by Eric Ravilious.

The hotel is fully illustrated in the current issue of THE ARCHITECTURAL REVIEW, *from which these photographs are taken. In an article which introduces the illustrations, Lord Clonmore writes " The new hotel at Morecambe Bay is in complete harmony with its natural surroundings, like those buildings which beautified England before the crash of the last century. Incidentally it is as comfortable as if it were on the Continent."*



Steps and terrace leading to the south loggia.

DESIGNED BY OLIVER HILL

QUESTIONS THAT ARISE

Architect and Client

¶ H. A. writes: "*I have recently begun in independent architectural practice. I have a client for whom I have done a large amount of preliminary work spread over a period of about six months in connection with some proposed building works.*

"*I had, however, rather hastily agreed at the outset to accept a fee of £10 for the preliminary work, prior to being instructed to get ahead with working drawings, etc. After doing a tremendous amount of this 'preliminary' work, and involving myself in a big out-of-pocket expense, my client decided to abandon the work. I duly received the £10, after a lot of delay and after many requests by me, and accompanying the cheque was a request by my client to hand over to him the various drawings and other matter which I had prepared during the course of the 'preliminary' work. My client is evidently under the impression that by paying me this inadequate sum he has bought the right to the drawings, etc., that I have prepared.*

"*Am I within my professional rights in declining to part with these drawings and other matter, or is he legally entitled to them?*"

The terms of the contract between the architect and the client is not free from doubt, but, on the assumption that the architect was to be employed as an independent contractor and not as a servant of the client, the copyright of the plans and drawings belong to the architect.

Copyright must be distinguished from ownership of the actual plans, and whilst the facts before me are incomplete, yet I assume that the materials for the plans were provided by the architect out of his own money and not as agent for the client, and therefore in my view the architect is entitled to retain the actual plans and he also owns the copyright of them; consequently he need not hand them over and could restrain any infringement of his copyright.

These views are based upon the assumptions I have had to make having regard to the incomplete facts before me.

E. F. I.

Detachable Screeding

¶ R. C. B. writes: "*A newly formed concrete floor in a hospital that is now being erected from my designs has to act temporarily as a roof. I have specified for it to be screeded with cement and sand 1 : 3 to a fall of not less than 1½ ins. in 10 ft.*

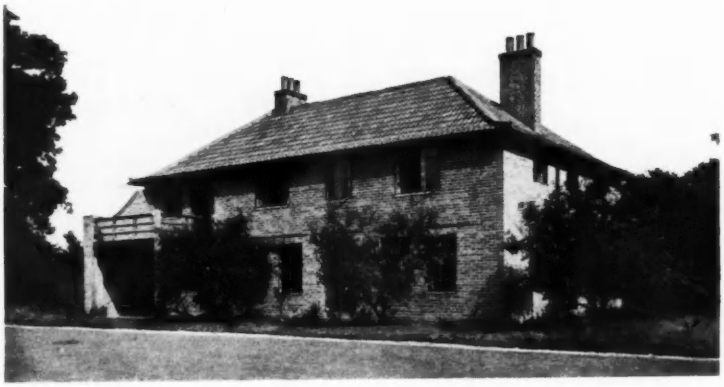
"*Can your expert inform me of any preparation I can paint the concrete surface with in order to make it easy for the screeding to be removed when the next floor is added?*"

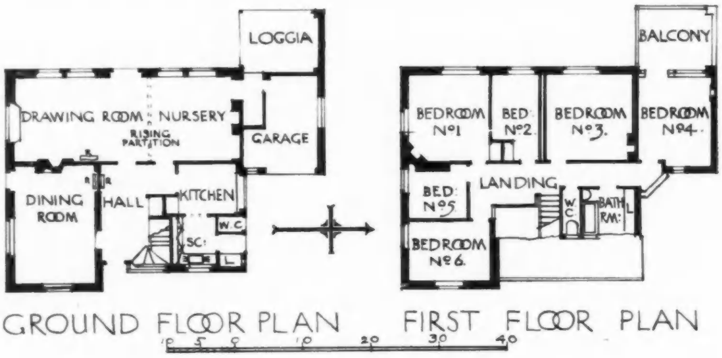
I believe that by painting the roof surface (which should be floated smooth) with ordinary oil paint in a good fat coat before applying the screeding to falls, the desired result would be attained. The paint will perish, but not before the cement has set, so that adhesion between the two layers should be prevented.

It will be realized that the screeding, with any asphalt or other covering which may be applied thereto, will be "floating" more or less free above the actual concrete flooring, but there seems no reason why this should be detrimental. If some degree of adhesion is desired the use of a bitumastic paint might secure it, but would present greater difficulty when removal occurred.

E. G.

HOUSE AT ONGAR:

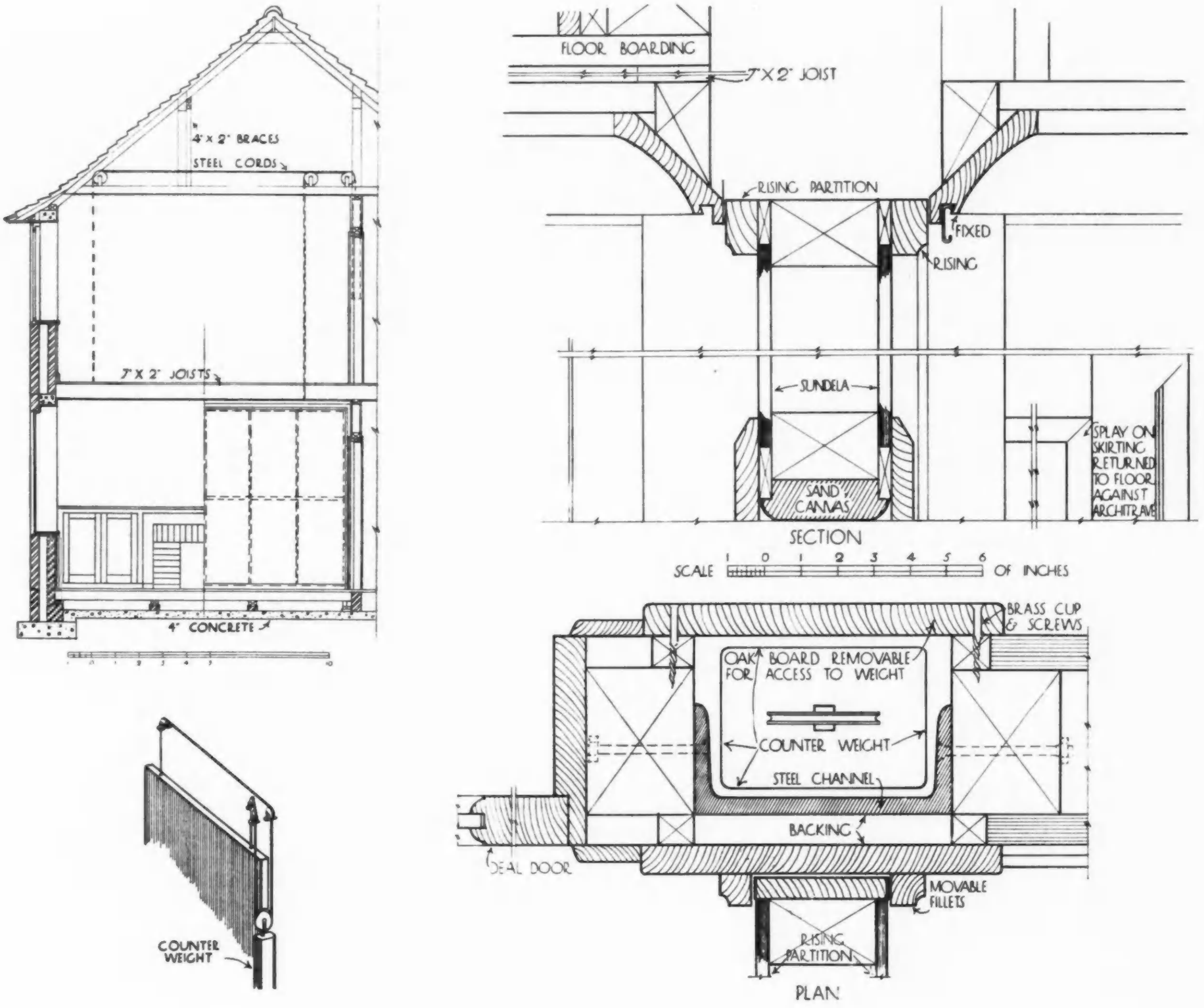




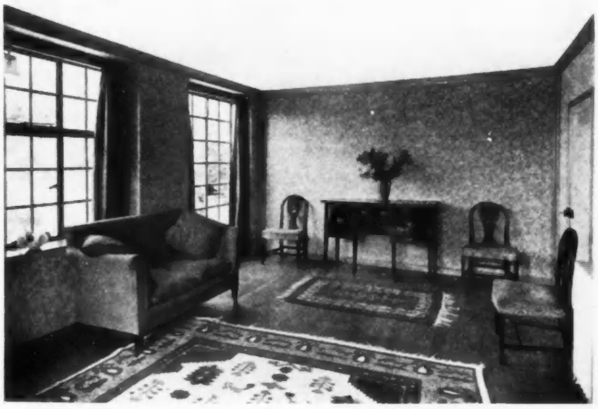
"Spring Field Orchard," Ongar, Essex, stands in an orchard, at the north end of which the site was chosen. The above photograph shows the south front with the loggia and sleeping balcony on the left. It has been so planned that no room, except the kitchen, has a north window. The external walls are faced with red hand-made bricks; the roof is covered red interlocking tiles.

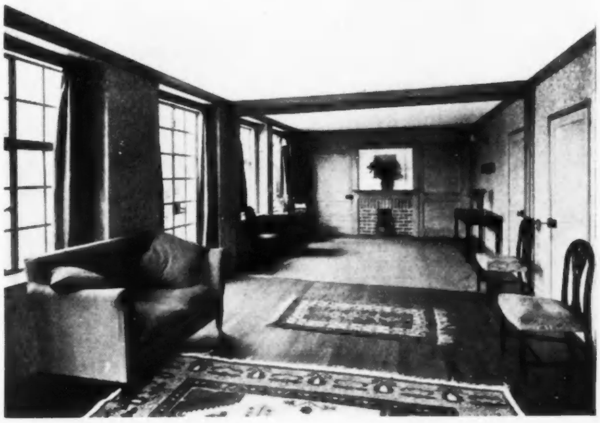
An original feature of the house is the rising partition, which, when down, separates the drawing room from the nursery. When drawn up it passes through the ceiling into the partition wall of the bedroom above. Its working is illustrated on the facing page, on which are shown a section through the house, plan and section of the partition and two photographs showing the partition up and down.

BY POWYS AND MACGREGOR


4" x 2" BRACES
STEEL CORDS
7" X 2" JOISTS
4" CONCRETE
COUNTER WEIGHT
FLOOR BOARDING
7" X 2" JOIST
RISING PARTITION
FIXED
RISING
SUNDELA
SAND CANVAS
SPLAY ON SKIRTING RETURNED TO FLOOR AGAINST ARCHITRAVE
SECTION
SCALE 1 0 1 2 3 4 5 6 OF INCHES
BRASS CUP & SCREWS
OAK BOARD REMOVABLE FOR ACCESS TO WEIGHT
COUNTER WEIGHT
STEEL CHANNEL
BACKING
DEAL DOOR
MOVABLE FILLETS
RISING PARTITION
PLAN

Details of the rising partition described on the facing page.





SLUM

*[In our SLUM issue for June 22 we dealt with the housing and slum clearance problems in six cities : Liverpool, Leeds, Manchester, Birmingham, Sheffield, and Glasgow. This was followed by similar analyses of the cities of Stoke-on-Trent and Bristol in the issues for July 27 and August 24, respectively. Below we print the ninth and tenth of the series.—*ED., *A.J.]*

[By PHILIP H. MASSEY]
B.Sc. (Econ.), F.R.Econ.S.

HULL

GENERAL POSITION

Area		13,050 acres	
Population	1921	290,681	
	1931	313,544	(20,000 unemployed)

Decennial increase 22,863
(1921 population of areas added in intercensal decade 3,531)

1931	Persons per acre	24·0	
	Number of private families	77,939	
	Population in private families	298,123	
	Structurally separate dwellings occupied	74,397	
	(vacant	953)	
	Rooms occupied	336,406	
	Persons per room	0·89	
1921-31	Increase in occupied dwellings	—not comparable	
	Increase in number of private families	—not comparable	
	Families per occupied dwelling	1931	1·05
	Average size of private family	1931	3·83 persons
	Average number of persons per room	1931	0·89
	Persons living more than 2 per room	1921	not comparable
		1931	24,058 or 8·07%
	(Families living more than 2 per room	1931	3,393 or 4·35%)

1931	Persons living over 3 per room	4,992
	3 and over 2	19,066
	Total over 2	24,058
	2 and over 1½	41,093
	Total over 1½	65,151
	1½ and over 1	65,653

46 families living 6 or more in 1 room
122 families living 8 or more in 2 rooms

The Wards

Number of wards in city	21
Number of wards containing over all average of over 100 persons per acre	1
Number of wards containing over all average of over 80 persons per acre	5
Number of wards containing over all average of over 1 person per room	5

Three Worst Wards on Persons Per Acre Standard

	Coltman	South Newington	West Central
Acreage	216	170	122
Population 1921 ..	21,286	17,717	17,488
,, 1931 ..	20,723	16,167	16,301
Persons per acre ..	95·9	95·1	133·6
Private families ..	5,092	4,100	3,979
Population in private families ..	20,460	15,974	15,129
Structurally separate dwellings occupied ..	4,838	3,999	3,777
Rooms occupied ..	21,850	17,303	16,149
Persons per room	0·94	0·92	0·94

Three Worst Wards on Persons Per Room Standard

	Drypool	East Central	Southcoats
Acreage	371	167	202
Population 1921 ..	18,601	16,374	19,454
,, 1931 ..	17,588	15,306	18,348
Persons per acre ..	47·4	91·7	90·8
Private families ..	4,234	3,689	4,410
Population in private families ..	17,154	14,937	18,202
Structurally separate dwellings occupied ..	3,998	3,464	4,287
Rooms occupied ..	16,109	13,308	15,982
Persons per room	1·06	1·12	1·14

CONCLUSION

No evidence has been received respecting Hull. We can therefore only follow our general rule.

4,992 people living over 3 per room (assume average 4) have 1,250 rooms. They should have 3,000 and therefore require another 1,750.

19,066 people living 3 and over 2 per room (assume average 2½) have 7,600 rooms. They should have over 12,600 and therefore require over 5,000 more.

41,093 people living 2 and over 1½ per room (assume average 1¾) have 23,500 rooms. They should have 27,700 and therefore require 4,200 more.

Minimum requirements are therefore 11,000 and maximum 43,500.
Raised by 25% 13,750 and 55,000.
Geometric mean 27,500.
Or say 6,000 houses.

POSTSCRIPT

Only about 30% of the City's old "5 Year Plan" has been carried out. The City has, however, distinguished itself by its ready reply to the Minister's appeal for fresh "Plans."

C A R D I F F

GENERAL POSITION

Area		11,984 acres	
Population	1921	219,580	
	1931	223,589	(20,000 unemployed)

Decennial increase 4,009
(1921 population of areas added in intercensal decade 19,396)

1931	Persons per acre		18·7
	Number of private families		54,820
	Population in private families		212,852
	Structurally separate dwellings occupied		42,987
	(vacant		589)
	Rooms occupied	248,521	
	Persons per room	0·86	
1921-31	Increase in occupied dwellings—not		comparable
	Increase in number of private families—not		comparable
	Families per occupied dwelling	1931	1·28
	Average size of private family	1931	3·88 persons
	Average number of persons per room	1931	0·86
	Persons living more than 2 per room	1921	not comparable
		1931	11,487, or 5·40%
	(Families living more than 2 per room	1931	1,690 or 3·08%)
1931	Persons living over 3 per room		1,737
	3 and over 2		9,750
	Total over 2		11,487
	2 and over 1½		25,298
	Total over 1½		36,785
	1½ and over 1		49,220

8 families living 6 or more in 1 room
42 families living 8 or more in 2 rooms

The Wards

Number of Wards in City	13
Number of Wards containing over all average of over 100 persons per acre	nil
Number of Wards containing over all average of over 80 persons per acre	nil
Number of Wards containing over all average of over 1 person per room	2

Three Worst Wards on Persons Per Acre Standard

	Canton	Plasnewydd	Riverside
Acreage	249	235	319
Population 1921 ..	19,066	17,507	19,240
,, 1931 ..	17,273	15,056	17,602
Persons per acre ..	69·4	64·1	5·25
Private families ..	4,467	3,915	4,278
Population in private families ..	17,053	14,574	15,940
Structurally separate dwellings occupied ..	3,502	3,141	3,174
Rooms occupied ..	20,729	19,210	20,988
Persons per room..	0·82	0·76	0·76

Three Worst Wards on Persons Per Room Standard

	Grange-town	South	Splott
Acreage	925	553	1,182
Population 1921 ..	16,817	15,010	20,668
,, 1931 ..	15,403	13,635	20,898
Persons per acre ..	16·7	24·7	17·7
Private families ..	3,842	3,307	5,138
Population in private families ..	15,067	12,998	20,615
Structurally separate dwellings occupied ..	2,682	2,152	3,763
Rooms occupied	15,339	12,881	20,491
Persons per room ..	0·98	1·01	1·01

Official Information

"Strange as it may appear to you, and perhaps some other people, we have no slums in Cardiff. I am, therefore, unable to reply to your queries.

Yours faithfully,"

Other Opinions

Presumably the writer of the letter implies—by saying that there are no "slums"—that no areas have been scheduled for clearance or improvement.

An expert unconnected with the city has declared that the docks area is "one complete slum" as well as being a "sink of moral corruption."

Another opinion is that 30% of the dwellings within one mile of the docks require immediate demolition.

CONCLUSION

So far as overcrowding is concerned, the Cardiff figures compare favourably with many of the English cities considered in this enquiry.

However, 3·08% of the families and 5·40% of the persons are living over 2 per room.

1,737	persons living over 3 per room (assume average 4) have 450 rooms. They should have 1,150 and therefore need a minimum of 700 more.
9,750	persons living 3 and over 2 per room (assume average 2½) have 3,900 rooms. They should have 6,500 and therefore need a minimum of 2,600 more.
36,785	persons living 2 and over 1½ per room (assume average 1¾) have 21,000 rooms. They should have 24,500 and therefore need a minimum of 3,500 more.

If all the houses at present occupied

were perfectly fit to live in, the inhabitants would want 6,800 more rooms.

If they were all unfit, over 32,000 would be required.

Pushing these figures up by 25% to allow for the fact that the size of most families is such as to render impossible housing at exactly 1½ persons per room, we get a minimum of 8,500 and a maximum of 40,000.

In the case of most of the towns, we have selected the geometric mean between these figures as giving a satisfactory index to requirements. If this procedure were followed here, the figure of 19,000 rooms, or, say, 5,000 houses, would be arrived at. It is to be emphasized that, in using this method, we are seeking to include unfit houses, not overcrowded, as well as to estimate the proportion of overcrowded houses unfit. Our formula gives on the whole a very conservative estimate.

Even if there were not a single house in Cardiff unfit to live in, the city would require 2,000 to abate overcrowding. Since we know that large dock areas should be demolished, it would not be unfair to follow the usual rule and take 5,000 as the true figure.

SUMMARY

The following figures represent the results arrived at prior to the consideration of Hull and Cardiff :—

Population 5,381,347.
264,629 living over 3 per room.
1,324,275 living over 1½ per room.*
282,000 rooms required merely to abate overcrowding at over 1½ per room.*
300,500 houses required altogether.

The analysis of Hull gives the following results :—

Population 313,544.
4,992 living over 3 per room.
65,151 living over 1½ per room.*
13,750 rooms required merely to abate overcrowding at over 1½ per room.*
6,000 houses required altogether.

The analysis of Cardiff gives the following results :—

Population 223,589.
1,737 living over 3 per room.
36,785 living over 1½ per room.*
8,500 rooms required merely to abate overcrowding at over 1½ per room.*
5,000 houses required altogether.

Totals for Ten Cities

Population 5,918,480.
271,358 living over 3 per room.
1,426,211 living over 1½ per room.*
304,250 rooms required merely to abate overcrowding at over 1½ per room.*
311,500 houses required altogether.

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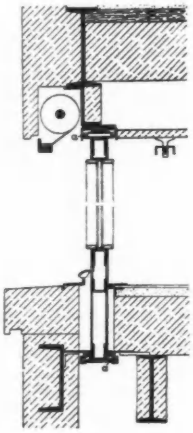
* Over 2 for Glasgow.



TRADE NOTES

[*BY F. R. S. YORKE, A.R.I.B.A.*]

Cleaning Casements

A NEW type of window that appears to combine the advantages of side hanging with facilities for cleaning generally associated with the vertically pivoted casement, has recently been introduced by Messrs. Mellowes.

•

The casement works with folding arms, on three friction points, and when opened in the normal way it extends at right angles to the frame after the manner of the hinged side-hung type; but, by the release of a plunger, it can be brought to a central position, still at right angles to the frame, for cleaning purposes. At no time during this operation does the casement project internally. There is no need for peg stay or similar attachment, since the window is held in any open position by friction, and, whilst it appears immovable by wind, the arrangement of the folding arms is such that it is easily opened or closed by pressure on the fastening handle on the outer edge.

Continental Windows

In the current number of *Bauwelt* there is a sixteen-page supplement devoted to the window. It is illustrated by more than a hundred photographs and diagrams and includes windows in wood and steel with single, double and triple glazing ; windows for the house, school, hospital, office and factory ; windows hung and opened in many ingenious ways ; those that slide and fold, and even those that are made to disappear entirely into the wall below the cill, whether this be raised above or level with the floor. A section through a window of this type, designed by Mies van der Rohe for a villa in Brünn, is reproduced at the head of these notes.

•

It is interesting to note that whilst the traditional windows illustrated in the introductory pages of the supplement are vertical, the majority of the modern types are made to fit horizontal openings.

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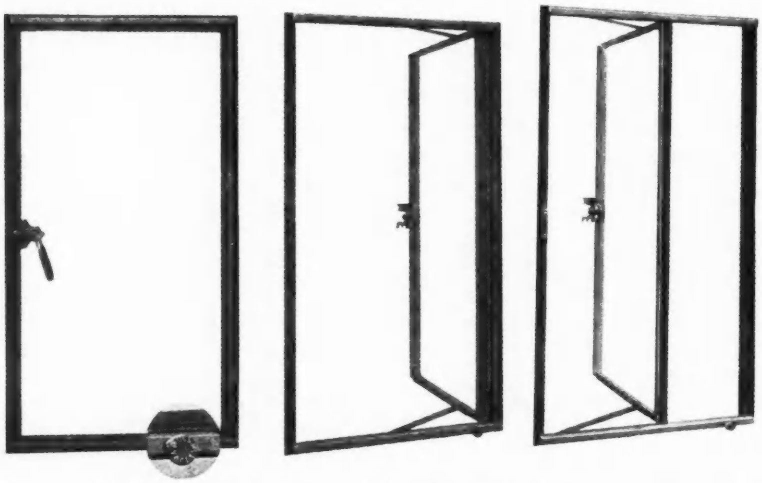
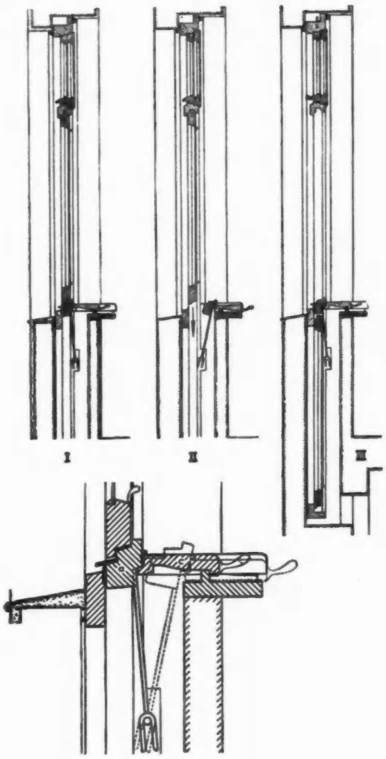
A type I find particularly interesting is the double-glazed metal window, in which the inner and outer casement move together as a single unit when the window is opened for normal ventilation purposes, and are separated only when the facing glass

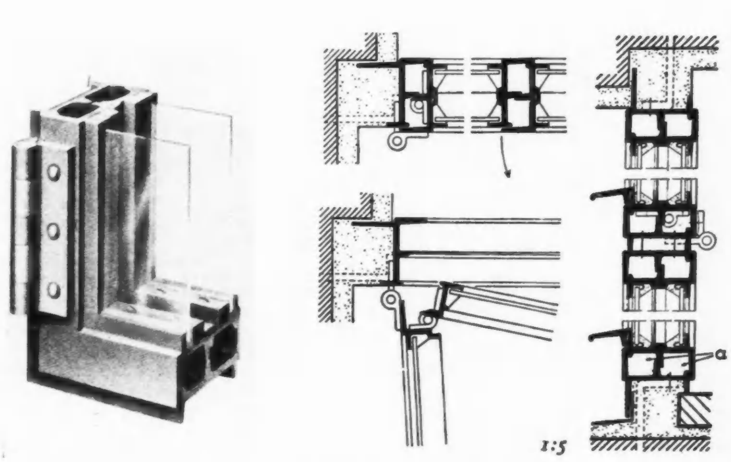


By means of folding arms this window, which is described in the first note, can be opened against the frame, and moved, for cleaning, to a central position.

surfaces need cleaning. I believe a standard window of this type is soon to be made in England, and I imagine there is a need for it, for although double-glazed windows are not employed here as generally as they are on the Continent, increasing traffic and street noise make them essential in the modern town building, and the normal double window with independent casements, set far apart, is not really efficient, and has a very clumsy appearance.



A window with a cill that slides inwards to allow the lower sash to drop into a cavity within the wall.—From BAUWELT.



A double-glazed metal window in which the inner and outer casements move together, but can be separated for cleaning.—From BAUWELT.

Standarized Natural Asphalte

With the development and wider use of mastic asphalte in building construction, the leading asphalte companies have for some time been conscious that approved standards of quality of materials and of executive practice should be set up, in order that users of this class of asphalte, and particularly those responsible for its specification, should have that measure of protection to which they are entitled.

•

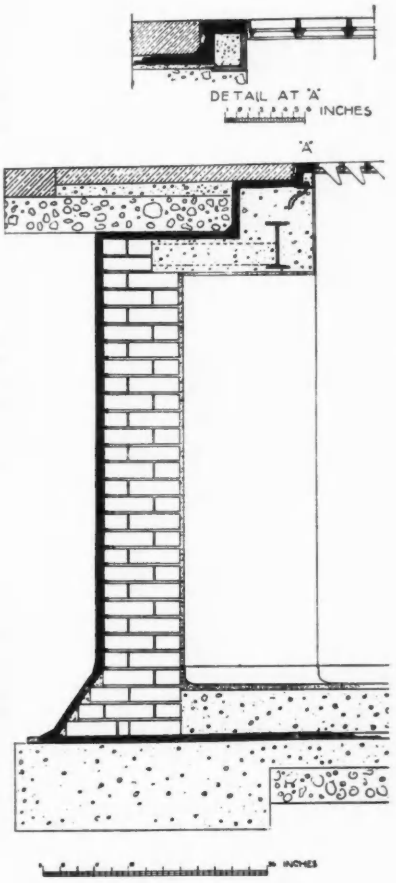
It has been felt that, unlike most building materials for which standard specifications have been prepared, asphalte is in a class alone, in that the asphalte company is not only the manufacturer of the material, but is generally also the contractor for its application. It was clear, therefore, that it would not be sufficient to prepare and standardize specifications governing its constituents and manufacture only, but that it would be necessary also to arrive at standards for executive practice.

•

Consequently the Natural Asphalte Mine-Owners and Manufacturers' Council, a body representative of the principal asphalte companies in the United Kingdom, has been formed for the purpose of co-ordinating and standardizing the manufacture and application of mastic asphalte for building construction. The Council's primary object has been achieved and standard specifications governing the three main classes of mastic asphalte work: roofing, damp-course and basement work and flooring, have been drafted.

•

It has been established during the course of research, and confirmed in practice, that only certain grades and blends of raw materials will give entirely satisfactory results (dependent to a large extent upon their geological formation and physical structure), but in the past, owing to the fact that the resources of raw materials available to the various companies were limited to the particular centres of production to which they had access, it was naturally not possible to combine the most valuable properties of each source into a single manufactured product. In future the joint resources for raw materials, which include many of the best known asphalte mines in the world, will be at the common disposal of all members, and standardization in manufacture, according to the findings of the experts, has thus been made practicable.



Asphalte lining over concrete raft, carried up external face of wall, over footings dubbed out in cement, continued over vaults, and finished to pavement lights. It is recommended that where possible the horizontal concrete loading coat be tied in at least 4½ ins. under the brickwork.

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The sources of supply of natural material which will be utilized in the Council's specifications include the well-known mines at Neuchatel, Switzerland (Val de Travers); Bassin de Seyssel, France; and St. Jean de Maruéjols, Gard, France. Rocks will be imported into this country in a raw state, and, after grinding and blending here, will be enriched with native bitumen from the Trinidad Lake; a proportion of graded silicous grit or other fine mineral aggregate being added during the process of manufacture to bring the material to the consistency required for the particular class of work for which it is to be used.

●

Where the Council's standardized materials are specified clients are entitled to receive a warranty, issued under seal, in addition to the guarantee furnished by the asphalte contractor, which is in a form approved by the Council.

●

The Council issues this week a booklet entitled *Asphalte in Building Construction*, in which examples of the application of asphalte to roofs and basements are dealt with in clearly drawn diagrams and brief notes. It is from this booklet that the illustration on this page and that in the last column on the preceding page are reproduced.

●

The booklet is on the whole comprehensive, but I do not find in it the actual specification that manufacturers are to adopt in order that asphalte may become a standardized material. I assume, however, that if the project is to be successful this specification will be accessible to all producers of asphalte working in this country.

LAW REPORT

BUILDING SCHEME—RESTRICTIVE COVENANTS

Mountain v. *Arthur Waterman, Ltd.—Chancery Division. Before Mr. Justice Maugham.*

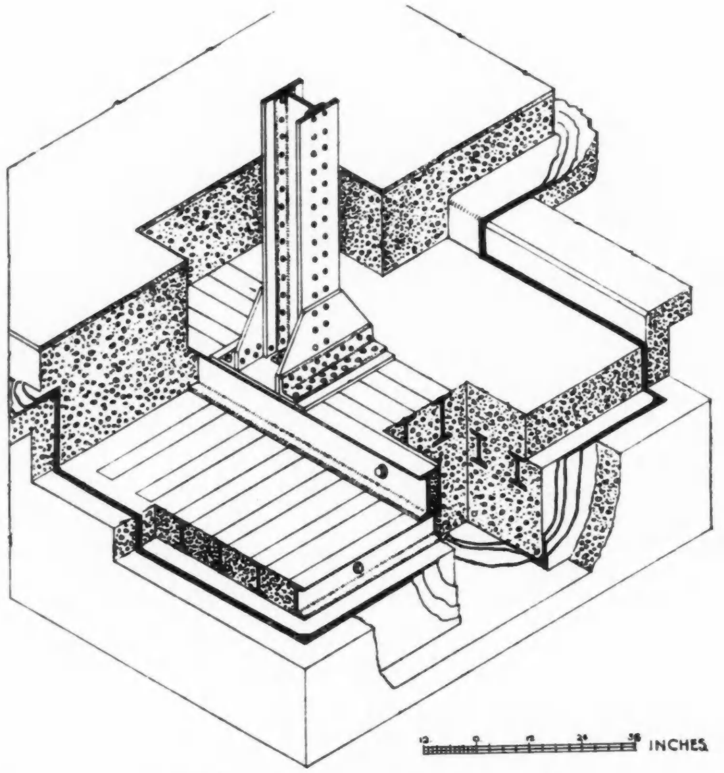
THIS was an action by an owner against a company who owned certain plots of land, for an injunction restraining them from erecting more than one house on each plot of land.

The plaintiff was Mr. R. S. Mountain, of Rocallie, Roundhay, Leeds, and the defendants were Arthur Waterman, Ltd., of Moreland Works, Leeds. The plaintiff complained that the defendants, having acquired four plots of land in Fearnville Terrace, near his residence, Rocallie, had built more than one house on each plot, and submitted that this amounted to a breach of the Fearnville Park Garden Estate building scheme.

Sir Gerald Hurst, K.C., for plaintiff, stated that the defendants had erected six semi-detached houses on four plots, and he was instructed that they were threatening to build two more on the same plots. Counsel said that here there was a building scheme, and this provided that not more than one house should be erected on each plot. He contended that the plaintiff was entitled to succeed as the defendants had ignored the restrictive covenants which governed the estate.

Mr. Lionel Cohen, K.C., for the defendants, said his clients did not deny the existence of the building scheme set out by his learned friend, but he said there was a serious dispute as to what covenants formed part of the building scheme for the Garden Estate. His clients' case was a denial of any breach of covenants, and further, the four plots in question never formed part of the building scheme of their estate.

His lordship dismissed the action, with costs, and entered judgment for defendants.



Asphalte damp-course as lining to stanchion pit.

His lordship, in the course of his judgment, said though the case was of a technical nature, it was actually without difficulty. It appeared that the estate was developed under a building scheme subject to a number of covenants and restrictions, and the question was as to the extent of the covenants which were applicable under the scheme. The property of the plaintiff was purchased by him in 1912, while the defendants acquired their land as late as this year. Under Rule 41 of the Fearnville Park Garden City Association, " not more than one house shall be erected upon any one plot," and the question was whether the rule was part of the scheme. He took the view that the rules were only binding to the members of the Association. As far as he could gather there had been no meeting of the Association since the Great War, and in his opinion they had not taken any active steps for a very long time. In his opinion, upon the evidence, he had not found that the rule, or any covenant to the effect of the rule, was part of the building scheme. Under these circumstances the restrictions claimed by the plaintiff did not apply to land.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Leeds Civic Hall (pages 284, 297-299). General contractors, Armitage and Hodgson, Ltd. Sub-contractors : G. Jackson and Sons, Ltd., models, fibrous plaster, crystal chandeliers to Assembly Hall ; Luxfer, Ltd., spiral staircase, lantern light, steel partitions ; Waygood-Otis, Ltd., lifts ; Tunstall & Co., asphalt ; Braithwaite & Co., heating, ventilating, plumbing ; G. N. Haden & Sons, Ltd., heating and ventilating ; Wippell & Co. wrought-iron balconies, screens and octagonal lanterns ; Leeds Fireclay Co., sanitary fittings ; Dixon and Sons, electrical work ; Manu-Marble Co., Manu-marble ; Edward Wood, steelwork ; Fenning & Co., marble work ; J. P. White and Sons, panelling Lord and Lady Mayoress's rooms ; Wm. Nicholson and Son, (Leeds) Ltd., panelling committee rooms and Council Chamber ; Pickles, Bros., slating ; May Acoustic Co., Maycoustic stonework ; Coleman, Ltd., revolving doors ; Milners Safe Co., strong-room doors and steel shelving ; Dixon Powner, balustrades ; Martin Van Straaten, wall tiling ; Synchronome Co., clocks ; Standard Telephones, telephones ; J. H. Smith, Gibbons, Ltd., and Kaye and Sons, ironmongery ; Conway, Ltd., turf and loam around building ; Hetley & Co., mirrors ; Best and Lloyd, ceiling fittings and wall brackets ; Brewis Ltd., carpets ; Smith Bros., curtains ; Bellman, Ivey and Carter, scagliola ; Richardson, Ltd., gallery chairs.

Hammersmith Underground Station (pages 291–294). General contractor, John Mowlem & Co., Ltd. Sub-contractors : James Carmichael, Ltd., finishing ; Horseley Bridge and Engineering Co., steelwork ; British Challenge Glazing Co., lantern lights ; Swanser and Sons, Ltd., metal letter boxes ; G. Johnson Bros., metal litter baskets ; E. Pollard & Co., Ltd., stalls and shopfronts ; James & Co., Art Pavements and Decorations, Ltd., and Carter & Co., Ltd., floor tiling ; Safety Tread Syndicate, Ltd., stair treads ; Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt ; Fortalite Coal Glaze, glazing wall surface ; The Light Steelwork Ltd., bronze balustrades and hand rails ; Crittall Manufacturing Co., Ltd., and James & Co., steel sashes.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

Plans passed by the BECKENHAM U.D.C.: Two houses, Village Way; four houses, Barnfield Wood Road; 14 houses, Village Way; dance hall, etc., Eden Park Hotel, Upper Elmers End Road; three shops, Wickham Road; two roads, off Hayes Lane and Barnfield Wood Road; extension of factory, 9, Croydon Road; 56 houses, Uplands and Greenways; eight flats, Foxgrove Avenue; 247 flats, Crystal Palace Park Road and Lawrie Park Road; 10 flats, The Avenue.

The Surrey Education Committee has approved plans for extensions at CATERHAM HILL council school, at an estimated cost of £12,370.

Plans passed by the FRIMLEY AND CAMBERLEY U.D.C.: Store, Frimley Green, for Mr. Francis; 15 shops and flats, Frimley Road, for Mr. H. G. Ives; two shops and houses, Frimley Green Road, for Mr. E. Mulroy.

Preliminary plans have been submitted to the KINGSTON Corporation for the development of the Norbiton Hall Estate, where it is proposed to erect 300 flats.

The Surrey Education Committee is to prepare plans for the erection of a secondary school at Bushey Mead, MERTON, at an estimated cost of £30,000.

Plans passed by the WALTHAMSTOW Corporation: 66 houses, Farm Lodge Estate, for Mr. J. W. Warboys; alterations, 350 Hoe Street, for London Co-operative Society, Ltd.; additions, Druids Hall, Bedford Road, for Mr. L. Rushton; alterations, Queen's Arms public house, Oxford Road, for Mr. M. Wallis; four houses, Handsworth Avenue, for Mr. P. G. Lees; five shops, Hale End Road, for Messrs. Good Bros.; two houses, Loxham Road, for Mr. Chas. W. Hodgson. Plans submitted: two houses, The Avenue, for Messrs. A. D. Young & Co.; four shops, Grosvenor Park Road, for Messrs. Good Bros.; rebuilding Markhouse Arms public house, Queen's Road, for Mr. A. E. Sewell; extensions, King's Laundries, Billet Road, for Messrs. Simmonds Bros.; factory extension, St. Andrew Mills, Higham Hill, for Messrs. Humphreys, Ltd.; four flats, Falmouth Avenue, for Messrs. Edward Culff & Co.; 124 houses, off Bridge Road, for Messrs. Partridge and Daniel; estate development, adjoining St. Mary's Church, for Messrs. J. Trevor and Sons.

Messrs. Thomas de la Rue & Co. are to erect a factory on ten acres of the Salisbury Hall Estate, WALTHAMSTOW.

SOUTHERN COUNTIES

Plans passed by the BRIGHTON Corporation: 20 houses, Carden Avenue Estate, for Messrs. Braybons, Ltd.; two houses, Valley Drive, Withdean, and two houses, East Brighton Estate, for Messrs. T. J. Braybon and Son, Ltd.; shops, Castle Square, and East Street, for Messrs. Dutton and Thorowgood, Ltd.; rebuilding stores and flats, 40, George Street, for Mr. O. Dalton; two houses, Ditchling Road, for Mr. A. Lower; shop and two houses, Warren Avenue, Rottingdean, for Brighton Co-operative Society, Ltd.; six houses, Whitehawk Road, for Mr. F. J. Wellman; five houses, Valley Close, Withdean, for Mr. T. R. Braybon; two houses, Stanmer Park Road, for Messrs. Wallis and Paris.

Plans passed by the OXFORD Corporation: Alterations and additions, 2-4, Brewer Street, for Christ Church trustees; development, Rose Hill Estate for Messrs. N. Moss and Son, Ltd.; two houses, Monmouth Road, for Mr. J. Laitt; extensions, Ashmolean Museum, Beaumont Street, for Oxford University; four houses, Bowness Avenue, Headington, for Mr. A. C. Carter; eight houses, Oliver Road, Cowley, for Messrs. R. Gardner and Son; houses, Banbury Road, for Mr. A. J. Colborne; additions, Botanic Buildings, High Street, for Magdalen College trustees; four houses, Ridgeway Road, Headington, for Messrs. J. Davies & Co.; two houses, Essex Street, for Messrs. W. Bennett and Son; two houses, Five Mile Drive, for Mr. H. Hinkins; two houses, Staunton Road, for Mr. A. W. Lee; two houses, Pullen's Lane Estate, for Messrs. F. and R. Lewis; four houses Great Headley Estate, for Great Headley Homesteads, Ltd.; paying patients Ward, Walton Street, for Radcliffe Infirmary governors.

Plans passed by the SOUTHAMPTON Corporation: Seven houses, Caxton Road, for Messrs. Cole and Son, Ltd.; new streets, off Shanklyn Road, for The Atherley Estate; five houses, Station Road, for Mr. W. G. Hinton; two houses, Heath Road, for Mr. A. G. Leal; 19 houses, Moir Crescent, for Mr. H. Kendall; two houes, Grosvenor Road, for Mr. P. M. Combes; store and workshop, Lower William Street, for Messrs. W. Dibben and Sons, Ltd.; 30 houses, off Cosford Road, for Mr. W. H. Masters; 10 houses, Portswood Avenue, for Mr. B. G. Underwood; two houses, Anglesea Road, for Messrs. F. W. Collins and Son; parish hall, Weston Lane, for Holy Trinity churchwardens; two houses, Bassett Close, for Mr. E. A. Blake; three houses, Eynham Avenue, for Mr. A. Passells; 40 houses, Ashby Road, etc., for the Hamtun Buildings Co., Ltd.; three houses, Holland Place, for Mr. G. H. Wing; rebuilding 122 to 126, St. Mary's Road, for Southampton Co-operative Society, Ltd.; 34 houses, Pirrie Close, for Mr. A. E. Knight; two houses, Oak Tree Road, for Mr. W. F. Thorne; additions, Bitterne Congregational Church, Dean Road, for trustees; two houses, Pound Street, for Mr. G. O'Dell; additions, workshops, Hazel Road, for Supermarine Aviation Works (Vickers), Ltd.; hostel, Fawley, for Agwi Petroleum Corporation, Ltd.; additions, Waverley Hotel, Blechynden Terrace, for Miss Thurston; 12 houses, off Ethelbert Avenue, for Swathling Housing Society, Ltd.; four houses, Bitterne Way, for Mr. T. W. Foot; four shops and houses, Oak Tree Road, for Mr. G. Beach; two houses, Melrose Road, for Mr. F. D. Aldrich; two houses, Melrose Road, for Mr. G. H. Soper; two houses, Burgess Road, for Mr. P. Richards; two houses, Dawlish Avenue, for Mr. G. Percy; canopy, The Picture House, Above Bar Street, for British Cinematograph Theatres, Ltd.; 14 houses, off Bassett Green Road, for Mr. S. T. Clark.

SOUTH-WESTERN COUNTIES

Plans passed by the PAIGNTON U.D.C.: Additions, Croft Hotel, Hyde Road, for Mr. R. G. Farmer; assembly hall, etc., Marist Convent, Fisher Street, for Rev. Mother Superior; shop and flat, Torquay Road, for Mr. T. Somerville; 30 houses off Colley End Road, for Messrs. Coombe and Sons; estate development, Colley End Road, for Messrs. Eastley & Co.; two houses, Redburn Road, for Mr. A. Chippendale; two bungalows, Colley End Road, for Messrs. Maunder and Sons; four houses, Winner Hill Road, for Messrs. G. Head and Son; alterations and additions, 7 Victoria Street, for Messrs. Timothy White, Ltd.; three houses, Osney Avenue, for Mr. R. W. Barnes.

The ST. IVES Corporation is to erect 20 houses in Bullen's Lane.

MIDLAND COUNTIES

Plans passed by the CHESTERFIELD R.D.C.: Two houses, Prestedge, for Mr. Ward; two houses, Sheffield Road, Killamarsh, for Mr. N. Mattson; four houses, Main Road, Shirland, for Mr. A. Richmond; shop and house, Main Road, Hasland, for Mr. Haslam; two houses, Hall Road, Brimington, for Mr. J. Myers.

Mr. Thomas Ward is to erect 18 houses at Drury Lane, COAL ASTON, Derbyshire.

The STOKE-ON-TRENT Corporation has approved plans, submitted by Mr. Mellor, architect, on behalf of Messrs. Dickenson and Steele, for the construction of streets off Riley Avenue, Burslem.

The STOKE-ON-TRENT Corporation is negotiating for 24 acres of land at Trent Vale, 25 acres at Hamford, and five acres at Longton, for housing schemes.

The SUTTON COLDFIELD Corporation has approved plans for the lay-out of land at Monmouth Drive for the provision of a nine-hole golf course, hard tennis courts, bowling green and putting course.

NORTHERN COUNTIES

The BARNSLEY Corporation is inviting tenders for the erection of 20 two-bedroom houses, and 75 three-bedroom houses, at Pontefract Road and Burton Grange.

Plans passed by the BARNSLEY Corporation: Two houses, Lees Hill, Ardsley, for Mr. R. G. Micklethwaite; eight houses, Rockingham Street, for Mr. O. Porter; five houses, Racecommon Road, for Mr. J. Richardson; six houses, Clumber Street, for Messrs. W. Dunk and Sons, Ltd.; four houses, Rockingham Street, for Mr. J. H. Hinchliffe; additions, Portland Street, for Shell Mex and B.P., Ltd.; two houses, Woodstock Road, for the Misses E. and A. Rushforth; two houses, Winter Row, for Messrs. A. Porter and Son; alterations to premises, Market Hill, for Messrs. Boots (Northern), Ltd.

Plans passed by HYDE Corporation: 12 houses, Foxholes Farm, for Messrs. G. and S. Ridgway; five houses, Clarendon Road, for Messrs. Dean and Whipp; six houses, Sheffield Road, for Mr. C. H. Pike; warehouse, Perrin Street, for the Clarendon Forage Co.; six shops and billiard hall, Borough Arcade, for Mr. W. Stansfield; additions and alterations, Baling Board stock room, Newton Mill, for Messrs. Jacobsen, Welch & Co., Ltd.; 176 houses, off Muslin Street, for the Corporation.

Messrs. E. M. Tweddle, Ltd., are to erect 20 houses in Woods Terrace, MURTON, Co. Durham.

Plans passed by the THORNTON CLEVELEYS U.D.C.: Two houses, Marsh Road, for Mrs. A. Roome; two houses, Carr Gate, for Mr. A. Dawson; alterations and additions, 50 Cleveleys Avenue, for Mr. M. A. Marr; 16 houses, Stanley Avenue, for Mr. W. Eastwood; conversion of houses into shops, 61 and 62 Rossall Road, for Mr. C. Higgins; two houses, Ritherham Avenue, for Mr. S. Greenwood; two houses, Carr Gate, for Messrs. G. Walsh and Sons, Ltd.

SCOTLAND

The GLASGOW Corporation recommends the reconstruction of Queen Victoria Drive bridge, at a cost of £8,000.

Plans passed by the GLASGOW Corporation: Shops at Meiklewood Road, and Moss Road, for Mrs. Margaret Spiers; stores, Drumoyne Road, for Wilson's Terazzo Manufacturing Co., Ltd.; seven bungalows, off Carmunnock Road, for Messrs. John Dickie and Son, Ltd.; factory, etc., Maukinfauld Road, for British Bitumen Emulsions, Ltd.; shop extensions, Dumbarton Road, for St. George's Co-operative Accy., Ltd.; steel building, Shuna Street, for Messrs. George MacLellan & Co., Ltd.; alterations, Paisley Road, Cardonald, for Paisley Provident Co-operative Society, Ltd.; workshop, Janefield Street, for Messrs. J. and A. Crawford, Ltd.; store, Foulis Lane, for My Lady Dyes, Ltd.

The GLASGOW Corporation has arranged to purchase ground in Barrhead Road, Cowglen, as a site for the proposed new infectious diseases hospital.

The GLASGOW Corporation has approved the lay-out of land at Springfield for the erection of 612 three-storey tenements for rehousing purposes.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen ; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	Aberdare	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	Banbury	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5	1 0¾
B	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton	N.W. Counties	1 5	1 0¾
A_2	Cambridge	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A	Cumberland	N.W. Counties	1 4	1 0
A	Darlington	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	Eastbourne	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	Felixstowe	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	Gateshead	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	Halifax	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	Ilkley	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	Jarrow	N.E. Coast	1 5½	1 1¼
A	Keighley	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	Lancaster	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	Macclesfield	N.W. Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	Nantwich	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	Oakham	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	Paisley	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	Queensferry	N.W. Counties	1 5½	1 1¼
A_2	Reading	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	St. Albans	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	Tamworth	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1 1¼
A	Tyne District	N. E. Coast	1 5½	1 1¼
A	Wakefield	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	Yarmouth	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

*** In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.**

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	,,		7	6
Building Sand	,,		7	9
Washed Sand	,,		8	9
2" Broken Brick	,,		8	[illegible]
¾" ,, ,,	,,		11	0
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	0
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	[illegible]	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	9	2	6
,, Wirecuts	,,	8	2	6
,, Brindles	,,	7	6	6
,, Bullnose	,,	9	14	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	8	8	0
Luton Facings	,,	8	0	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	[illegible]	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

			s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		19	0
,, ⅞"	,,	1	1	6
,, 1"	,,	1	3	6
,, 1¼"	,,	1	7	6
,, 1½"	,,	1	12	0
Deal matchings ⅝"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1¼"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	,,	8	6
,, ,, ⅜"	,,	8	3
,, ,, ½"	,,	8	0
,, ,, ⅝"	,,	7	6
,, ,, ¾"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	,,	5	0	8	6
Boots	,,	3	3	4	5
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	1	0
,, drawn pipes	,,		18	0
,, soil pipe	,,	1	5	0
,, scrap	,,		13	6
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			10½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	0	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2½
,, ,, 26 oz. ,, ,, ,,	,,					3½
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
¼" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

			£	s.	d.
Digging over surface n/e 12" deep and cart away		Y.S.		2	9
" to reduce levels n/e 5' 0" deep and cart away		Y.C.		8	6
" to form basement n/e 5' 0" deep and cart away		"		9	0
" " 10' 0" deep and cart away		"		9	6
" " 15' 0" deep and cart away		"		10	0
If in stiff clay	add	"		2	6
If in underpinning	"	"		4	0
Digging, return, fill and ram	"	"		4	0
Planking and strutting to sides of excavation		F.S.		1	0
" " to pier holes		"			5
" " to trenches		"			5
" " extra, only if left in		"			3
Hardcore, filled in and rammed		Y.C.		10	0
Portland cement concrete in foundations (6-1)		"	1	6	0
" " " (4-2-1)		"	1	12	6
" " " underpinning		"	1	16	0
Finishing surface of concrete, spade face		Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra only for bends	Each	2	8	3	9
" junctions		3	9	4	6
Gullies and grating	"	16	6	18	0
Cast iron drains and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
" " in cement	"	29	15	0
" Stocks in cement	"	35	15	0
" Blues in cement	"	52	0	0
Extra only for circular on plan	"	2	0	0
" backing to masonry	"	1	10	0
" raising on old walls	"	2	0	0
" underpinning	"	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	"			5½
" " " red brick facings and pointing	"			11
" " " blue brick facings and pointing	"		1	4
" " " glazed brick facings and pointing	"		3	6
Tuck pointing	"			7
Weather pointing in cement	"			3½
Slate dampcourse	"			10
Vertical dampcourse	"		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	"	6	9
¾" paving or flat	"	4	0
1" paving or flat	"	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	"		13	6
Artificial stone and do.	"		13	0
York stone templates, fixed complete	"		10	6
" thresholds	"		13	6
" sills	"	1	0	6

SLATER AND TILER

		£	s.	d
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	"	3	7	0
Do., 24" × 12"	"	3	17	0
Westmorland slating, laid with diminished courses	"	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	3	0	0
Do., all as last, but of machine-made tiles	"	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	"	4	6	6
" " " " " " (green)	"	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
" to stanchions	"			8
" to staircases	"		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	"		4	6
" " roofs	"		6	6
" " trusses	"		7	6
" " partitions	"		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" " " " "	"	1	17	6
1¼" " " " "	"	2	3	0
¾" × 2" fir battening for Countess slating	"		9	6
Do. for 4" gauge tiling	"		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
" " " 2 "	"		2	9
" " " 3 "	"		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" " " " " "	"		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	"	2	12	6
1½" do.	"	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S		1	6
1¼" do.			1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" " "	"	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	3	9
2" " " "	"	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" " " "	"	2	8
1½" " but moulded both sides	"	2	4
2" " " "	"	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" " "	"	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	2	6
1½" deal moulded wall strings	"	2	1
1½" " outer strings	"	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" " "	"	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	"	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	"		19	6
Do. stanchions with riveted caps and bases and do.	"		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"		17	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	6
Do. in flashings		1	18	0
Do. in covering to turrets, etc.	"	2	4	0
Do. in soakers	"	1	10	0
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close " "	"			4½

		½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1¼" s.	1¼" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks	F.R.	1	0	1	2	1	5	2	1	3	0	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	3
Do. to stop ends	"		6½		8		9		11	1	3	—	
Boiler screws and unions	"	3	3	3	9	5	0	8	0	—		—	
Lead traps	"	—		—		—		6	3	8	9	—	
Screw down bib valves	"	6	9	9	6	11	0	—		—		—	
Do. stop cocks	"	9	0	11	0	14	6	20	6	47	0	—	

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	"	1	6
Do. outlets	"	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	"	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	"		3	6
Lathing with sawn laths to ceilings	"		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"		1	9
Do. vertical	"		2	3
Rough render on walls	"		1	4
Render, float and set in lime and hair	"		2	0
Render and set in Sirapite	"		2	2
Render, backing in cement and sand, and set in Keene's cement	"		3	1
Extra, only if on lathing	"			4
Keene's cement, angle and arris	F.R			6
Arris	"			2
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			1½
1" granolithic pavings	Y.S.		3	6
1½" "	"		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	"		17	6
9" × 3" " " " "	"	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S		7½
26 oz. do. and do.	"		8½
Arctic glass and glazing with putty	"	1	1
Cathedral glass and do.	"	1	2
Glazing only, British polished plate	"		7
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	"		9
Do. with washable distemper	"	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper from	"	2	9

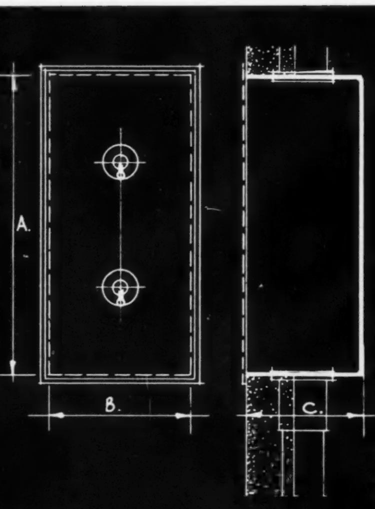
SIZES OF SWITCH BOXES: FLUSH PATTERN

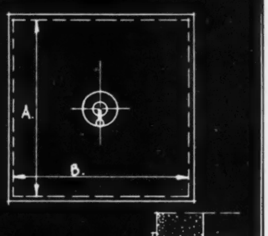
5 AMP. SWITCHES.

Nº of ways	A.	B.	C.
1.	3"	29/16"	17/8"
2.	5"	29/16"	17/8"
3.	7"	29/16"	17/8"
4.	5"	5"	17/8"
5.	7"	5"	17/8"
6.	7"	5"	17/8"
7.	7"	7"	17/8"
8.	7"	7"	17/8"
9.	7"	7"	17/8"
10.	9"	7"	17/8"
11.	9"	7"	17/8"
12.	9"	7"	17/8"
13. - 16.	9"	9"	17/8"
17. - 20.	11"	9"	17/8"

15 AMP. SWITCHES.

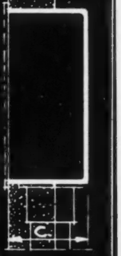
Nº of ways.	A.	B.	C.
1.	33/4"	31/4"	21/8"
2.	61/2"	31/2"	21/8"
3.	91/4"	31/4"	21/8"
4.	61/2"	61/2"	21/8"
5.	91/4"	61/4"	21/8"
6.	91/4"	61/4"	21/8"
7.	91/4"	91/4"	21/8"
8.	91/4"	91/4"	21/8"
9.	91/4"	91/4"	21/8"
10.	12"	91/4"	21/8"
11.	12"	91/4"	21/8"
12.	12"	91/4"	21/8"





SIZES OF SWITCH BOXES. 5 AMP SHALLOW FLUSH PATTERN.

Nº of ways	A.	B.	C.
1.	23/4"	23/4"	11/4"
2.	5"	23/4"	11/4"
3.	71/4"	23/4"	11/4"
4.	5"	5"	11/4"



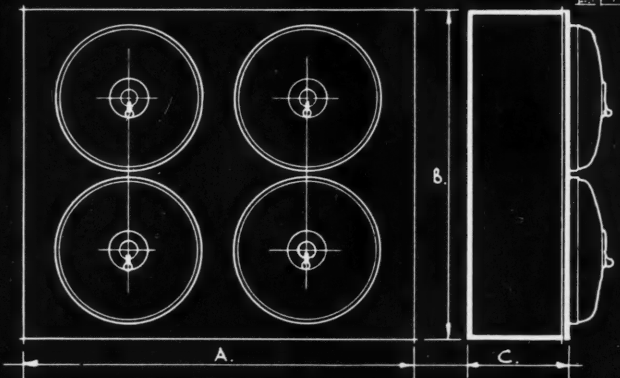
SIZES OF SWITCH BOXES: SEMI-RECESSED PATTERN.

5 AMP. SWITCHES

Nº of ways	A.	B.	C.
2.	61/8"	27/8"	11/4"
3.	81/8"	27/8"	11/4"
4.	61/4"	51/4"	15/8"
5. 6.	8"	51/4"	21/8"
7. 8. 9.	8"	8"	21/8"
10. 11. 12.	101/2"	8"	21/8"
13 TO 16.	101/2"	101/2"	21/8"
17. TO 20.	13"	101/2"	21/8"

15 AMP. SWITCHES

Nº of ways	A.	B.	C.
2.	63/4"	31/2"	11/4"
3.	93/4"	31/2"	11/4"
4.	63/4"	63/4"	15/8"
5. 6.	93/4"	63/4"	21/8"
7. 8. 9.	93/4"	93/4"	21/8"
10. 11. 12.	123/4"	93/4"	21/8"



SIZES OF PLUG & SWITCH COMBINATIONS.

Surface type. 5 amps. wood box 53/4" × 31/4" × 11/2"
iron box 51/4" × 23/4" × 15/16"
Flush type 5 amps. 51/4" × 23/4" × 15/16"

SIZES OF WALL PLUGS.

Flush pattern · 2 pin · 2amp. – 19/16", 5amp. 25/8" diam.
Flush pattern · 3 pin · 15 amp. – 23/4", 31/4" diam.

SIZES OF JUNCTION BOXES.

SQUARE TYPE:

from 21/2" × 21/2" × 13/8 deep
to 18" × 18" × 3" deep

RECTANGULAR TYPE:

from 31/2" × 2" × 11/2" deep
to 12" × 9" × 3" deep
and 12" × 8" × 4" deep

SMALL ROUND TYPE:

for 1/2" & 3/4" conduit 23/8" diam. × 1"
for 1" conduit 23/8" diam. × 11/8"

LARGE ROUND TYPE:

for 5/8", 3/4" & 1" conduit 33/16" diam. × 13/8"
for 11/4" conduit 33/16" diam. × 11/2"
for 11/2" conduit 33/16" diam. × 13/4"
for 2" conduit 4" diam. × 21/2"

CONSUMPTION OF VARIOUS APPLIANCES.

	CONSUMPTION	COST PER UNIT AT 6 PENCE
Vacuum lamp of 32 C.P.	40 watts	1/4d per h'r.
Gasfilled lamp of 60 C.P.	40 watts	1/4d " "
Small vacuum sweeper	160 "	1.d. " "
Electric iron 4 lbs	400 "	21/2d " "
Kettle or toaster (2pint)	600 "	31/2d " "
Desk fan (12")	80 "	1/2d. " "
Washing machine	400 "	21/2d. " "
Heater for room abt. 15' × 12'	2000 "	1 shilling.

above table from Messrs Hope's cat.

Sizes etc., based on the fittings of the General Electric Co Ltd.

DEFINITIONS AND NOTES

Volt: the unit of electrical pressure

Ampere: the unit of electrical current

Ohm. the unit of resistance to passage of electrical current. i.e. if the pressure is measured in volts and the current in amperes, then the resistance is in Ohms : $\text{Ohms} = \frac{\text{volts}}{\text{amperes}}$.
The resistance of a circuit determines the amperage or current in that circuit.

Watt: the unit of energy or power: denotes the power used when one volt causes one ampere of current to flow. Watts = amperes × volts.

1. K.W. (Kilowatt). = 1000 watts.

1. B.O.T. unit (Board of Trade unit of Electricity) = 1.K.W. for 1. hour

746 watts = 1 horse power

APPROXIMATE ALLOWANCES.

Electric Heating: allow 1 watt per cubic foot of space to be heated. If rapid heating is required allow 11/2 watts.

Electric Motors: allow 1000 watts per horse power for wattage required by motors.

Electric Lighting: allow 1 watt per sq. foot of room area when calculating the lighting required for a room with table lamps in addition. If no extra table lamps are to be used allow 2 watts per square foot.
or, for small offices allow ...... 1. watt per sq. ft. of floor area
for general offices allow 11/2 watts " " " " " "
for typing rooms allow 2-3 watts " " " " " "

Water heating: $\text{kilowatts required} = \frac{\text{gallons} \times \text{temp. rise in °F.}}{\text{time in minutes} \times 5.7}$

INFORMATION SHEET: ELECTRIC LIGHTING & HEATING: SIZES OF SWITCH & JUNCTION BOXES ETC.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

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ELECTRIC LIGHTING: IV

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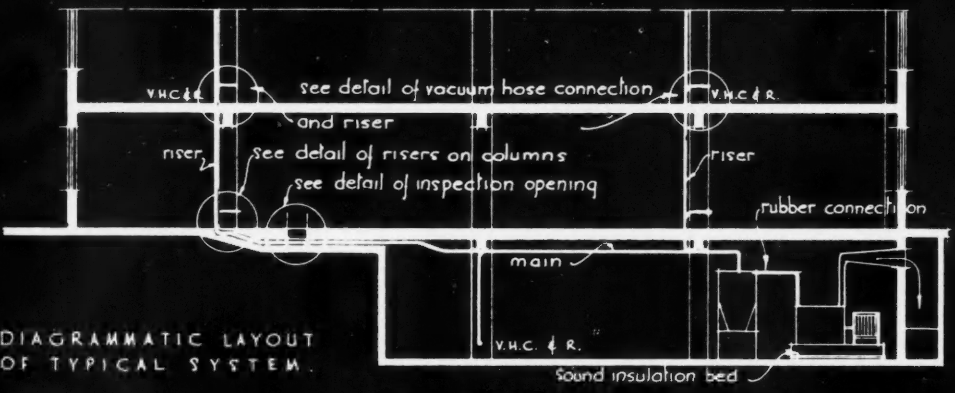
THIS week we publish the last of the series of four Information Sheets dealing with electric lighting ; also, a Sheet giving the diagrammatic lay-out of vacuum cleaning systems. Next week's Sheets will be devoted to steelwork.

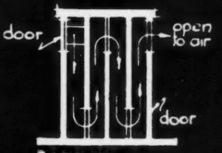
The following is a full list of the subjects previously issued :—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units : 1.
13. Apr. 12—Lavatory Units : 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs : 1.
23. June 29—Concrete Stairs : 2.
24. July 6—Pressed Steel Stairs : 1.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs : 2.
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes : 1.
30. Aug. 17—Lay-out of Wardrobes : 2.
31. Aug. 24—Common Sizes Miscellaneous.
32. Aug. 24—Electric Lighting : I.
33. Aug. 31—Electric Lighting : II.
34. Aug. 31—Electric Lighting : III.


V.H.C.&R.
see detail of vacuum hose connection
and riser
V.H.C.&R.
riser
see detail of risers on columns
riser
see detail of inspection opening
rubber connection
main
V.H.C. & R.
Sound insulation bed

DIAGRAMMATIC LAYOUT OF TYPICAL SYSTEM.

NOTE: VACUUM HOSE CONNECTIONS SHOULD BE LAID OUT SO THAT THE WHOLE AREA CAN BE SERVED WITH 50'0" HOSES.


door
open to air
door

SECTION OF EXHAUST AIR SILENCING CHAMBER.

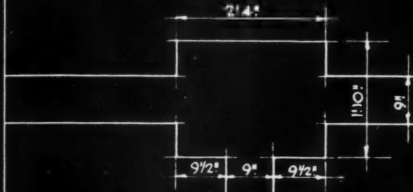
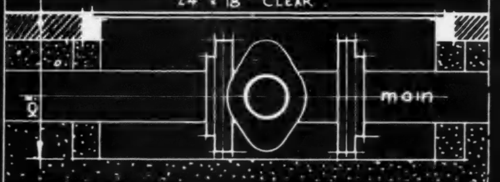
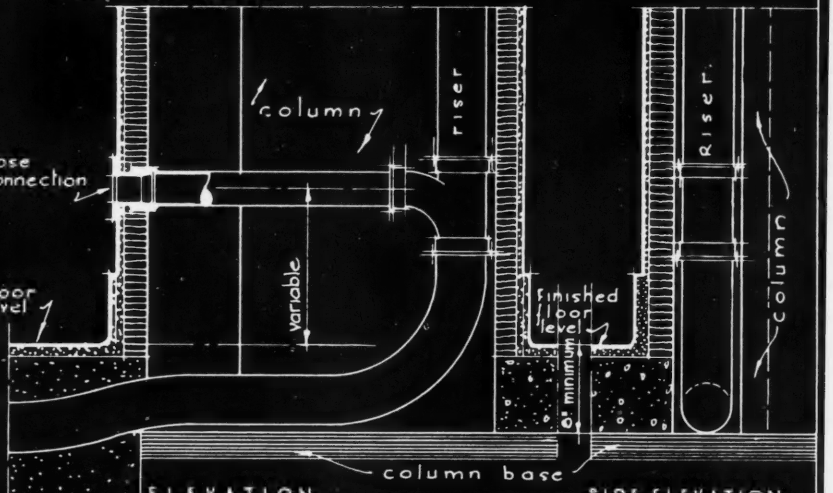

2'4"
1'10"
9"
9½"
9"
9½"

DIAGRAM OF HOLE TO BE LEFT IN ROUGH CONCRETE TO TAKE INSPECTION BOX. 24" x 18" CLEAR



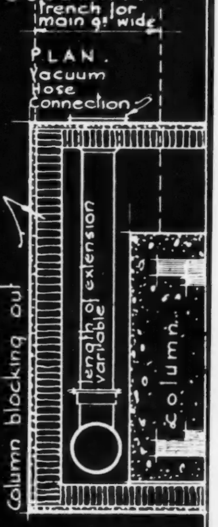
INSPECTION BOX (where mains are in raft).


column
riser
Hose Connection
Floor level
variable
Finished floor level
6" minimum
column base
Riser
column

ELEVATION

SIDE ELEVATION

ARRANGEMENT OF RISERS ON COLUMNS.


trench for main 9" wide
Vacuum Hose Connection
column blocking out
length of extension variable
column

PLAN.

DIMENSIONS (approximate only).

PLANT ROOM.

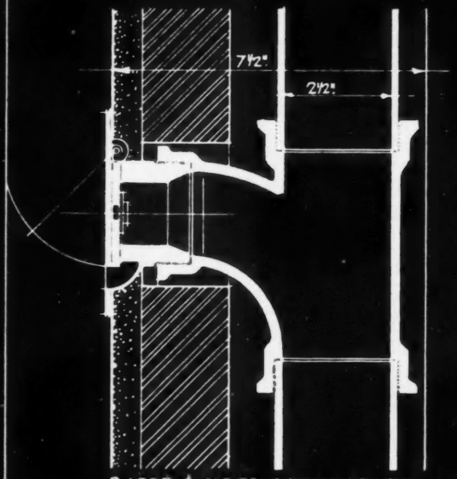
1. exhauster etc.	17'6" x 8'0" x 10'0" high
or	14'0" x 10'0" x 10'0" "
2 exhausters etc.	17'6" x 14'3" x 10'0" "

SILENCING CHAMBER:

must be open to the air	7'0" x 3'0" x 5'0" "

PIPE SIZES:

one vacuum hose connection requires 2" riser & 2" main.
two V.H. connections require 2½" riser & 2½" main
three V.H. connections require 2½" riser & 3" main
two 2½" risers require a 3½" main.
three 2½" risers require 3½" to 4" main according to lenth of run.
two 3½" mains equal one 4" main approx.
two 4" mains equal one 5" main approx.



RISER & HOSE CONNECTION. FLUSH FITTING
SCALE: 3" TO 1'0"
diagram above is of fitting by the Sturtevant Engineering Co Ltd.

INFORMATION SHEET: DIAGRAMMATIC LAYOUT OF VACUUM CLEANING SYSTEM & DETAILS.
SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

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VACUUM CLEANING SYSTEMS

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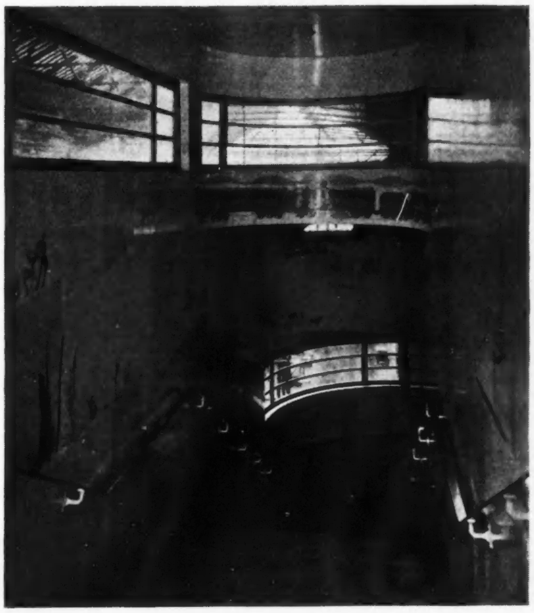
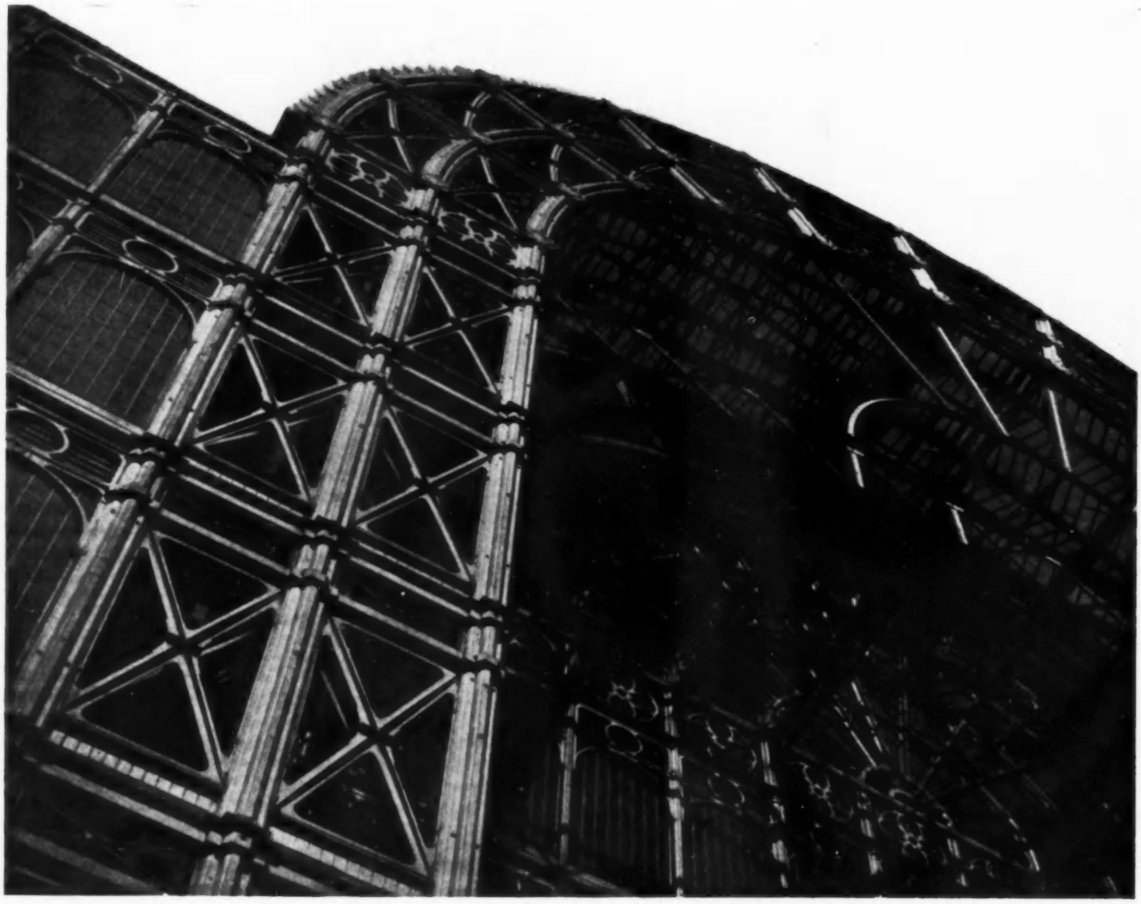
FOR a list of the Information Sheets previously issued, see the other Sheet accompanying this issue.

NEWS CINEMA
IN VICTORIA STATION



THE new News-Reel Theatre at Victoria Station, designed by Alister G. MacDonald, was opened to the public on Tuesday last. It is built beneath the existing station roof and aims to draw its public from those waiting for trains. This photograph shows the entrance staircase, with wall paintings by Edward Carrick and Eric Joysmith. Through the windows can be seen the interior station. The cinema is illustrated on pages 321-325 of this issue.

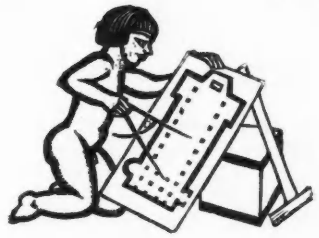


MODERNISM IN ENGLAND

A close-up view of the Crystal Palace. It was designed by James Paxton to house the great Exhibition of 1851.

Scorned by the Victorians as a "giant conservatory," it is hailed by visiting Continental architects as the outstanding piece of modernism in England.

This photograph, taken by Max Rosher, is from the Exhibition of Modern Industrial Photography now being held at the Royal Institute Galleries.



THE R.I.B.A. AND SCHISMATIC BODIES

UP to this week the R.I.B.A. have taken no part in the controversy which the foundation of the new Institute of Registered Architects has occasioned, beyond a brief letter of protest circulated to members by the President. Such silence is, of course, compatible with the dignity of the R.I.B.A.'s position as holders of the Royal Charter but has possibly in this case proved to be bad tactics. For no reply is often an admission of the lack of one ; and, even if their position as the controlling body in the profession is unassailable, to those outside who are not completely familiar with the processes of professional administration a detailed declaration of their standpoint would have meant the saving of a great deal of confusion.

However, they have now amply made amends by the publication in the current issue of the *R.I.B.A. Journal* of a statement under the heading of "The R.I.B.A. and Current Affairs." In this statement is emphasized the all-embracing character of the R.I.B.A. and its unassailable status ; the latter has not, we think, been questioned, but their statement enunciating it is worth reprinting as a concise record of their achievements :

"The Royal Charter has given to the R.I.B.A. a position of prominence which in the past it has shown itself fully qualified to maintain. Nationally and imperially it is regarded as the body best qualified to represent 'architectural opinion.' It is the R.I.B.A., and the R.I.B.A. only, which is asked to appoint representatives on innumerable national bodies. We cannot attempt to name them all here, but in architectural research there is the Building Research Board and the British Standards Institution, and in education, the British Schools at Rome and Athens, the former, as far as architecture is concerned, being largely maintained by the R.I.B.A. grant, and the bodies controlling the conduct of architectural schools throughout the country.

"It is the President of the R.I.B.A. who is universally accepted by the profession and public alike as being the head of the architectural world, and Presidents, elected by the profession, have always filled this position with dignity and skill.

"As another sign of the achieved power of the Royal Institute we can quote its influence in the formation in recent years of the Building Industries National Council, and the Council for the Preservation of Rural England, both of which were founded within the walls of the Institute by R.I.B.A. members, who would be the first to acknowledge that the chief power to their elbow came from the fact that they were working with the full weight of the Institute behind them. Had it not been for the existence, for the integrity, and for the power of the R.I.B.A., no such action could ever have been taken. As another instance of R.I.B.A. strength we can quote the agreement of a new form of contract, and the influence which the R.I.B.A. has had in persuading the official bodies concerned to make revisions of their bye-laws."

Other contributions of the R.I.B.A. towards architectural well-being are then mentioned, the formation of the Architects' Benevolent Society, aid to the relief of architectural unemployment, the work of the Board of Architectural Education and the existence of the Allied Societies. On these points all are, we think, agreed.

"Every single attempt," the statement further says, "by schismatic bodies to detract from the power of the R.I.B.A. must be doomed to failure, because no other body can hope to assume the position which the Institute has gained during a hundred years' consistent work."

The portion of the statement, however, that is of the greatest value in clarifying the issues of the present controversy, is that which follows, dealing with the Code of Professional Practice :

"Those responsible for the so-called Institute of Registered Architects have spoken in lofty terms of the necessity for one code for the profession, giving this as one of the chief reasons for the formation of a new body. A new code can only be one of three things : the same as the Institute code, more rigorous or more lax. It is highly improbable that it can be more rigorous for reasons which need no elaboration ; if it is to be the same as the Institute code there is patently no justification for the formation of another body in order to promote it ; and if more lax, we may well ask ourselves what will be the effect on the public, and, for that matter, on the profession, of the existence of a new and laxer code. The existing Institute code has shown itself to be acceptable to a vast majority of qualified men. It is fairly applied by the R.I.B.A. and with determination.

"While on the reasons for the formation of another, and, as we think it, superfluous body, we can refer to the constantly reiterated statement that only such a body as this new Institute can effectively promote revisions in the Act to bring it more into agreement with the generally recognized desires of the profession. This statement is surely made so as to imply that until the formation of a new Institute no steps had been taken to consider amendments to the Act. On August 8, 1931, a dinner was held at the R.I.B.A. to celebrate the passage of the Act through the Houses of Parliament. If there had been at any stage a tendency to accept without comment the Act as passed by the State surely that would have been the occasion. But we find Lt.-Col. T. C. R. Moore, the member under whose guidance the Act travelled through the House of Commons, acknowledging that the Act as it stands is not perfect, and adding that he supposed it was because the architectural profession was accustomed to working and building for the future rather than for the present that it had been prepared to accept the mutilated Act with enthusiasm ! 'This measure,' he said, 'is largely designed to influence the future of the profession rather than the present.'

"It is with an eye to the future that the R.I.B.A. Registration Committee and the Registration Council itself has conducted its work. Within a few months of the formation of the Registration Council the R.I.B.A. proposed to it that a Registration Act Amendment Committee should be formed, and this Committee is now sitting under the chairmanship of Mr. Stanley Hall. The initiative in this came from the Institute and the power to promote the suggestion via the Registration Council also comes from the Institute."

The adequacy of the R.I.B.A. code has not been questioned. It is the lack of such a code for architects who choose to remain outside the Institute that has been the cause of apprehension.

This, however, revision of the Registration Act could remedy. If the revisions, therefore, proposed by the

Amendment Committee are revealed to be of such scope as to furnish an adequate reply to Sir Edwin Lutyens's complaint of the Act's insufficiency ; and if the Registration Council can give an equally satisfactory reply to the questions that have been raised regarding their proposed interpretation of the Act, then the principal reason put forward for founding a new body will no longer be valid. These questions remain to be answered.

Meanwhile the R.I.B.A., by the timely reminder of the existence of an Amendments Committee (whose existence indeed is quite unknown to many), have shown that they are working as energetically as always for the good of the profession.

We would emphasize, however, that it is still only possible to put on record, as they become available, the facts and announcements regarding this important question. Until further light is thrown on the position, particularly as to the powers of the Registration Council, the ultimate verdict of the profession must be withheld.

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NOTES & TOPICS

HIGH BUILDINGS IN LONDON

MR. H. R. SELLEY, M.P., in a recent contribution to *The Evening Standard*, said : " The rehousing of the people on the site of their former homes is, in my opinion, the only way to wipe slums from London. Certainly no more estates of the magnitude of Becontree will be built by the L.C.C." This reads like sound sense, and from one who until recently was a confirmed " take them to the outskirts " man.

*

But let us beware of too hasty conversions, for these remarks quoted above were tacked on to propositions for high buildings of ten and more storeys which I find very difficult to believe in.

Anyone who talks of high buildings should realize clearly at the outset that tall buildings need a good deal of land round them if they are not, as in New York, going to produce a still greater measure of overcrowding.

*

I was privileged to see some of the preliminary drawings upon which Mr. Selley is basing his proposals, and I say without hesitation that without a generous measure of surrounding open space these blocks would be anti-social and dangerous, and quite incapable of carrying the population he looks for without risk to health and happiness of their occupants.

*

Given good site planning and first rate design in the detailed planning and equipment, a similar type of building *might* be possible, but not at the high density per acre proposed.

*

The solution of the slum clearance problem in London will not come from such panic proposals.

*

A MODEL PIECE OF PLANNING

Those people who feel that England is going rapidly to the dogs should remember that the ability to talk of the technique of planning and the carrying through of a planning scheme are two different things.

*

Our planning publicity is not of the best, but we have just completed a five-year plan of electricity development costing £27,000,000, with the utmost smoothness, and the minimum of disfigurement—and done it to time.

*

The Electricity Grid scheme of major distribution is now complete, and the next stage of re-organization of detailed distribution may well commence.

*

This scheme which was worked on an entirely new type of organization has disregarded all existing boundaries and set a model which will in time produce a very much healthier attitude towards planning of all sorts.

*

THE MENIN GATE

A few days ago I lunched in the shadow of the Menin Gate, and wished that Sir Reginald Blomfield's original suggestions to the Belgian Government had been accepted. There is a fine vista of this Memorial from the Grand Place, but why were the Belgians so short-sighted as not to widen the street by ten feet as was suggested? It would have made all the difference. But they insisted on building each house exactly on the old building lines.

*

On the other side of the Menin Gate there is a collection of estaminets and souvenir shops, quite unworthy of this town of historic memories. Here Sir Reginald Blomfield proposed that there should be a spacious square, but again Belgian conservatism was too strong. As a result the Menin Gate, it must be confessed, is a little overpowering.

*

It would be an admirable companion to Buckingham Palace and the Admiralty Arch, but in this quiet Flemish town, which every year becomes more peaceful, it looks almost as out of place as if Sir Reginald's new building in Carlton Gardens were to be re-erected on the village green at Chalfont St. Giles.

While in Belgium I paid a visit to the site outside Brussels where the International Exhibition of 1935 will be held. M. Van Neck has been appointed Architect-in-chief, and is bringing to the lay-out of the site all the experience gained at Antwerp in 1920.

*

The foundations are just being laid of the Grand Palaces which will stand on the plateau of Heysell with a view across to the city. From the Palaces there will be a boulevard leading down the hill, a mile and a half long and about 150 feet broad. This has been carefully planned to link up the city with housing suburbs which are growing up, and thus the Exhibition will play a permanent part in improving the roadways.

*

It was amusing to see the men at work cutting out of the clay the bed of a river which will flow down the hill and will be illuminated from below by electric light in the evening.

*

EYES THAT SEE NOT

This " time-lag " business gets in the way on every occasion. Quite recently the church organists were gathering together to discuss, among other things, church interiors. Every man to his own loft, you might think, but no ; they had a great deal to say about the desecration of church ornament and equipment through the intrusion of the machine, and so on.

*

I wish I could clear up one or two points with them. I would like to tell them that they—or more properly, their vicars and patrons and churchwardens—have only themselves to blame if churches are laden with hopeless machine-made ecclesiastical bric-a-brac, masquerading as church art-metal, etc.

*

On the one hand you have a machine, perfectly harmless and innocent of sin, and on the other a church with a set of oil lamps rendered *hors de combat* by the new electric-light mains that are working their way along the village street.

*

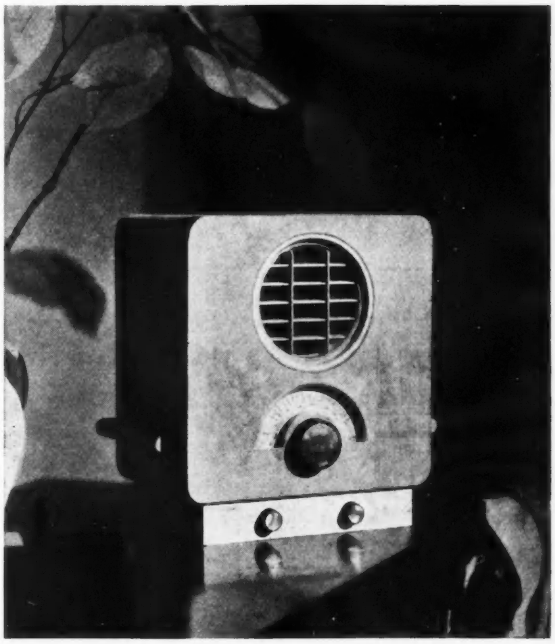
Now there are several things to be done in such a situation. If you feel that the ancient traditions handed on from our ancestors demand that all shall be in harmony, and if you feel certain about the handing on, then obviously you get in the handicraft worker and get him to beat out a bayonet-holder lamp socket and surround to match, while the weavers weave a suitable flex from the local sheep wool.

*

If this proves difficult, as indeed it might, then I suggest that we may worship more honestly by telling the machine to do an honest day's work and produce a satisfactory lamp fitting that sheds a good light where it is wanted.

*

Of course, churches are full of shoddy stuff. Church people have asked repeatedly for stuff that looks like the old stuff without ever once meaning to pay the price for it. And having got it, they haven't had the taste, until latterly instructed, to distinguish true from fake. They deserve all they have got, and a good deal of honest scorn into the bargain.



An architect-designed wireless set. One of the New Ecko sets designed by Serge Chermayeff.

PUTTING ART IN ITS PLACE

But this art nonsense, there's no end to it. One is apt to judge hastily, no doubt. Impulsiveness may lead one into strange errors at times. But a smile crept unbidden, positively unbidden, I do assure you, into my face while I read on the front page of *The Times* an announcement of the Courtauld Institute of Art.

*

It was not the Institute itself so much as the list of thirty-two lecturers, each sitting in a little hole labelled, " Coptic Art," " Chinese Art," " Gothic Architecture," and so on most exhaustively.

*

It was that and the thought of the London that surrounded them, and all the nameless vulgar horror of it, and it going on the while (as Synge would say), and the suburbs growing faster than sin, and Woolworths and Marks and Spencers distributing taste to the millions and—well, there is something just a little teasing in the contrast, is there not. Art being so solemnly classified, and with such system, while pandemonium crashes round the Institute.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, September 14

TOWN AND COUNTRY PLANNING SUMMER SCHOOL. At Digswell House, near Welwyn. Until Sunday, September 17. The list of the lectures, discussions, visits, etc., was printed on pages 288–289 of our last issue.

SHIPPING, ENGINEERING AND MACHINERY EXHIBITION. At Olympia. Until September 23.

EXHIBITION OF LIVERPOOL HOUSING SCHEMES. At the Central Lending Library, William Brown Street, Liverpool. Until September 30.

Tuesday, September 19

LONDON SOCIETY. Visit to the works of Shahinian, Ltd., 259, Ealing Road, Alperton, Middlesex. 2.45 p.m.

NEWS

●

POINTS FROM THIS ISSUE

"Nationally and imperially the R.I.B.A. is regarded as the body best qualified to represent 'architectural opinion'" *315*

Anyone who talks of high buildings should realize clearly at the outset that tall buildings need a good deal of land round them if they are not, as in New York, going to produce a still greater measure of overcrowding *316*

"From the main features of the house down to the tiniest details the prospective owner can have his say" *320*

Towns have either to adapt themselves to take advantage of new forces, or succumb to them *332*

"Sir Christopher Wren had a long and active life, encountering much obstruction from commissioners and others" *336*

●

SLUM

Up to the time of going to press the number of slum clearance schemes submitted by local authorities to the Minister of Health, as required by the Minister's five-year plan, set out in Circular 1331, is 58 out of a total of 1,717 housing authorities in the country. The latest date for submission of schemes is September 30.

NATIONAL WATER SUPPLY

Professor Patrick Abercrombie, F.R.I.B.A., speaking at the annual Conference of the Lancashire Urban District Councils last week, discussed the question of water shortage at the present time. He said that some sort of national water supply would have to be decided upon. The question of water supply would be a big problem in the future, and if scattered buildings were allowed to be put up it would prove an expensive job if no system of planning was in vogue.

DESIGN AS A NECESSITY

Councillor A. P. Simon, in an address on "Design as a Necessity" before the Manchester County Forum last week-end, said that if we continued to think of the small home as a complete unit in itself, there was no reason why we should not put up houses on the gridiron plan, and achieve, if we allowed for better hygienic conditions, a continuance of Hulme, Chorlton-on-Medlock, Collyhurst, and Newton Heath.

We lacked singularly a civic feeling for our surroundings, he continued, but if we would only realize that a group of 500 houses (which was a reasonable scheme of house development) meant an expenditure of £250,000 then perhaps public opinion would express itself similarly to the way it did over the more compact unit. Houses and small buildings in the aggregate governed the larger and more important undertaking. They should be the objects of careful design in themselves, and, more important, in relation to one another. If we continued to think of a house unit as a thing costing from £400 to £500, those responsible for the design were not likely to give the same attention to it that they would to a unit costing £250,000.

INCREASE EMPLOYMENT

The campaign of the Special Committee for Public Relations of the Building Industries National Council for the regularization of employment over a period, with planned expenditure mitigating the cycle of over-expansion in the boom and unemployment in times of depression, necessarily implies a campaign for the increase of employment at the present time. Employment in the industry is still at a low ebb, especially on the public works side.

It is therefore encouraging to learn from "The Times" that "Ministers feel that the time has now come when public works of a remunerative character . . . might be definitely encouraged." No effort must be spared to spread this belief and to enlarge the conception of the remunerative character of public works. Prepare the way for an intensive effort by building up a fund now.

Cheques for subscriptions should be made payable to "The Special Committee for Public Relations," and should be addressed to the Hon. Treasurer, at 5 Duke Street, Adelphi, W.C.2.

INSTITUTION OF STRUCTURAL ENGINEERS

The following meetings have been arranged by the Institution of Structural Engineers for the forthcoming session: October 26, "Cumberland Hotel and Annexe," by A. Frost; November 9, "Whiteabbey Loop-Line Viaduct of Reinforced Concrete," by R. L. McIlmoyle, A.M.INST.C.E.; November 23, "Building Regulations," by C. Roland Woods, M.B.E., LL.B.; December 14, "Rigid Frame Bridges in Reinforced Concrete," by A. P. Mason, B.SC.; January 11, 1934, "The Design, Fabrication and Erection of a Small All-Welded Machine Shop," by C. Helsby; January 25, "The Actual Strength of Steel I-Beams," by Ewart S. Andrews, B.SC., M.INST.C.E.; February 8 (Joint Meeting with British Section of Société des Ingenieurs Civils de France) "Recent Bridge Developments in France," by M. Lossier; February 22, "Metallic Materials of Construction," by Walter Rosenhain, D.SC., F.R.S.; March 9, Extra Meeting: Joint Meeting with Chemical Engineering Group (Society of Chemical Industry), "Properties of Building Materials," by Major V. Lefebure; April 12, "Lightweight Concrete Construction," by J. Singleton-Green, M.SC., A.M.I.MECH.E.; April 26, "Mechanical Methods for the Analysis of Indeterminate Structures," by H. A. Whitaker, M.ENG., A.M.INST.C.E.

YORK CASTLE

A report from the Office of Works on the work required to put the old Debtor's Prison at York Castle into repair was laid last week before a special committee of York City Council, who are negotiating with the Yorkshire County Committee for the purchase of York Castle and grounds (states *The Yorkshire Post*).

The Debtor's Prison has been scheduled as a historic building by the Office of Works, but they are not prepared to take it over. Underpinning is required, the building having unken badly at the corner adjoining the Assize Courts, and other structural repairs are also necessary.

Clifford's Tower was underpinned by the Office of Works some years ago, and the Assize Courts, which belong to the County Committee, have been similarly treated recently.

The question of whether the property shall be bought by the Corporation with this liability for the Debtor's Prison, was discussed at the meeting, but no decision was reached. The negotiations with the County Committee are to be continued.

THREE NEW CINEMAS

Two new cinemas are to be erected in London Road, Liverpool, and Renfield Street, Glasgow, respectively. Each will contain seating accommodation for 3,000 persons. Both cinemas will be called "The Plaza," and building is expected to begin next month.

The Troxy Cinema, Commercial Road, E., designed by Mr. George Coles, was opened on September 11. It provides seating accommodation for 3,000 persons, and was erected at an approximate cost of £200,000.

MR. A. STRACHAN BENNION

Sir Hilton Young, the Minister of Health, has appointed Mr. A. Strachan Bennion, F.S.I., M.I.STRUCT.E., to be an additional member of the Departmental Committee which he set up last July to consider and report on the questions of the capital cost of construction and the annual cost of maintenance of various classes of public buildings provided by local authorities.

ALEXANDRA PALACE

At a meeting of the trustees of Alexandra Palace and Park, held last week, it was unanimously decided to proceed with the £250,000 scheme for reconstruction and modernization of the building.

It was officially stated that alternative schemes had been considered by the architect, Mr. E. Cecil Davies, F.R.I.B.A., and that it had been decided to adhere to the original plans.

ITALIAN EXHIBITION

The International Exhibition of Decorative and Industrial Art and Architecture at Milan, where many British products are being shown, has been extended for a further month to October 31. The exhibition, which opened on May 10, was due to close on September 30.

Since May 10 more than 375,000 people have paid for admission to the exhibition.

The Italian State Railway announces that the 50 per cent. reduction in fares to Milan and for tours in Italy in connection with the exhibition will now remain in force until the end of October.

ARCHITECTS' 100TH CINEMA

The Plaza Cinema, West Wickham, Kent, which was opened last week, is the hundredth cinema building to be designed by Messrs. Stanley Beard and Clare.

It is also the first cinema to be erected in the new housing estate areas in this part of West Kent.

NEW DIRECTOR OF THE NATIONAL GALLERY

Mr. Kenneth Clark, Hon. A.R.I.B.A., has been appointed as the next Director of the National Gallery, in succession to Sir Augustus Daniel, K.B.E., HON.A.R.I.B.A., whose term of office expires on December 31 next. Mr. Clark has been Keeper of the Department of Fine Art, Ashmolean Museum, Oxford, for the past two years.

£45,000 HEALTH CENTRE FOR BERMONDSEY

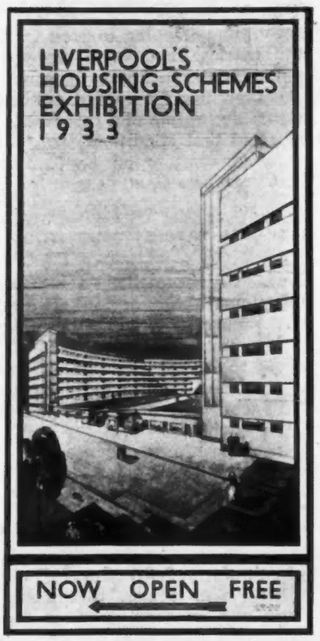
The Bermondsey Borough Council, subject to the approval of the Ministry of Health, is to build a new health centre, at a cost of £45,000.

MANCHESTER SOCIETY OF ARCHITECTS

Two ecclesiastical buildings were visited by members of the Manchester Society of Architects on September 6. The first was the new choir school for Manchester Cathedral, by Messrs. Thomas Worthington and Sons, which is to be adorned by a piece of sculpture by Mr. Eric Gill. The accommodation consists of classrooms, refectory, etc., for the choir boys, and is very successfully planned within a circumscribed area.

The second building was the Church of Saint Gabriel at Prestwich, by Messrs. Taylor and Young. This is a suburban church, designed with the greatest economy, which has not detracted in any way from its success as a piece of dignified church architecture.

There was a satisfactory attendance of members at each of the visits.



At the Liverpool Housing Schemes Exhibition. A poster prepared by G. C. Timmis in the office of L. H. Keay, Director of Housing, Liverpool.

EXTENSIONS TO SPRINGFIELD ASYLUM

At a meeting of the Fife Joint Asylum Committee, held at Cupar last week, it was decided to recommend the combining authorities to improve and extend the asylum at Springfield, at an approximate cost of £100,000.

ST. PAUL'S ECCLESIOLOGICAL SOCIETY

In the programme of arrangements for the forthcoming session of the St. Paul's Ecclesiological Society, just issued, it is pointed out that the series of public lectures on the English Parish Church, begun last session, is to be continued. These lectures, to be given at the R.I.B.A. on Tuesday evenings at 8 p.m., are as follows: October 10—"The English Parish Church from the Reformation to the Civil War," by Sir Charles Nicholson, Bart., M.A., F.R.I.B.A.; chairman: Rev. Canon S. A. Alexander, C.V.O., M.A. November 14—"The English Parish Church, Wren and the Eighteenth Century," by Arthur T. Bolton, F.R.I.B.A.; chairman: Mr. A. R. Powys, F.R.I.B.A. December 19—"The Stone Sculptures and Wood Carvings in Worcester Cathedral," by P. M. Johnson, F.R.I.B.A. November 29—"Reredoses," by Professor A. E. Richardson, F.R.I.B.A. Several visits are to be made to churches in and around London.

The Society records that Sir Giles Gilbert Scott, R.A., is the ninth member of the Society to occupy the presidency of the R.I.B.A.

NEW N.S.C. PREMISES

The National Sporting Club has completed the purchase of the freehold of No. 19 St. James's Square, for so long known as Winchester House. It is understood that demolition of the building will start in a few days, and that the new headquarters of the N.S.C., which is to be erected from the designs of Mr. Arthur J. Davies, F.R.I.B.A., will be ready in the early part of 1935.

THE LATE MR. JAMES DOD

Mr. James Dod, the Liverpool architect, has died at Deganwy, North Wales, in his 85th year. For more than 21 years he was treasurer of the Liverpool Architectural Society, and he had been an honorary associate for the past twelve years. He was within two years of the jubilee of his membership, a record surpassed by only three people.

Mr. Dod's sons, Mr. E. J. Dod and Mr. H. A. Dod, both well-known Liverpool architects, are both Fellows of the Society, the former being its hon. treasurer and the latter vice-president. Between them, father and sons have had a total of 86 years' membership.

R. I. B. A.

CONDUCT OF COMPETITIONS

The Council of the Institute proposes to amend the R.I.B.A. Regulations for the Conduct of Architectural Competitions as follows:—

(*a*) To add the following words to the first paragraph of Clause 1: "The Promoters may, if thought desirable, appoint a representative to confer with the Assessor or Assessors during the progress of the competition."

(*b*) To amend Clause 10 to read as follows: "In the case of limited or private competitions where the Royal Institute are satisfied that special circumstances may exist, modification of these Regulations may be approved by the Royal Institute."

Subject to consideration being given to any comments or criticisms received, the amendments will be ratified by the Council at their next meeting.

PROPOSED VISIT TO UNDERGROUND STATIONS

The Art Standing Committee of the Institute have approached the London

Passenger Transport Board with a view to arranging an informal visit of members of the Institute to some of the recently completed Underground stations on the new extension between Finsbury Park and Cockfosters (states the *R.I.B.A. Journal*).

The London Passenger Transport Board have readily agreed to afford facilities for such a visit, which it is proposed to arrange on Tuesday, October 10 next, and in order that the lighting arrangements and effects at these stations may be fully appreciated it is suggested that the party should commence their tour at about 8 o'clock on that evening.

The party will be limited in number and members who wish to take part are asked to notify the Secretary R.I.B.A. without delay, and in any case not later than Wednesday next, September 20.

ARCHIBALD DAWNAY SCHOLARSHIPS

The works submitted by candidates for the R.I.B.A. (Archibald Dawnay) Scholarships will be on exhibition in the R.I.B.A. Galleries, 9 Conduit Street, London, W.1, from today, September 14, to Saturday, September 23, 1933, inclusive. The exhibition will be open between the hours of 10 a.m. and 7 p.m. (Saturdays 10 a.m. and 2 p.m.).

The scholarships are intended to foster the advanced study of all forms of construction, and are tenable at the schools of architecture recognized for exemption from the examinations of the R.I.B.A.

COMPETITION NEWS

SURBITON HOSPITAL

One hundred and sixteen schemes were submitted in the competition for a proposed hospital at Surbiton, which closed on September 1. The award of the assessor, Mr. C. E. Elcock, F.R.I.B.A., is expected to be announced within the next ten days.

GIDEA PARK LTD.'S COMPETITION

The directors of Gidea Park, Ltd., have received 164 sets of designs in their competition for five different types of houses, ranging from £400 to £900. The assessors of the competition, which closed on Monday last, are to meet on September 18, and it is expected that the result will be announced at the end of the month.

DESIGN OF A CAFE-RESTAURANT

Up to the time of going to press we learn that 250 entries have been received by Messrs. Jensen and Nicholson for conditions of their competition for a scheme of interior and exterior decoration of a café-restaurant. It is expected that conditions, etc., will be posted to competitors on September 30. See also *Competitions Open*, below.

BELFAST SANATORIA COMPETITION

The Belfast City Council has now approved the Municipal Sanatoria competition scheme. Premiums of 500 guineas for the first, 200 guineas for the second and 100 guineas for the third design are offered by the Tuberculosis Committee, the conditions being in accordance with those laid down by the Royal Society of Ulster Architects. Final sanction has to be given by the Northern Ireland Ministry of Home Affairs.

INSTITUTION OF STRUCTURAL ENGINEERS

The Institution of Structural Engineers are offering four prizes, totalling £100, for design of a modern open-air bathing pool with ancillary buildings. These prizes are being presented by the British Reinforced Concrete Co., Ltd., with the object of encouraging the æsthetic design and artistic development in England of concrete and reinforced concrete. The money will be allocated as follows: Two first prizes of £40, and two second prizes of £10. All members of the Institution of Structural Engineers who at the time of entry are between the ages of 21 and 40 years are eligible to compete for the prizes.

The competition will consist of an examination in the design of an open-air bathing pool, and will be conducted on Beaux Arts methods, that is, a twelve-hour "esquisse" (or sketch design), followed by 28 days in which to produce the final finished drawings. Candidates will sit for the preliminary "esquisse" on Saturday, October 7, 1933, in London, and at such other centres as may be required. The finished drawings must be submitted on or before November 4.

Full particulars of the competition are obtainable from the Secretary of the Institution, 10, Upper Belgrave Street, London, S.W.1. The closing day for entry is September 25.

Competitions Open

September 21.—Sending-in Day. Proposed Town Hall for the Borough of Hornsey. Assessor: C. Cowles-Voysey, F.R.I.B.A. Premiums: £350, £250 and £150. Full conditions, etc., were published in our issue for May 17.

September 30.—Competition for speculative house designs, organized by the Architectural Association with the co-operation of Messrs. J. Laing and Sons, Ltd. Three types of house are required. Assessors: C. Lovett Gill, F.R.I.B.A.; L. H. Bucknell, F.R.I.B.A.; J. R. Leathart, F.R.I.B.A.; Arthur W. Kenyon, F.R.I.B.A.; T. Alwyn Lloyd, F.R.I.B.A.; and J. W. Laing. Premiums: £25 for the design placed first in each group. Copies of the conditions are being issued free, on application, to all members of the Architectural Association, and members of the R.I.B.A. can obtain copies (price 2s. 6d.) from Mr. F. R. Yerbury, General Secretary, The Architectural Association, 34-36, Bedford Square, W.C.1. Full particulars of the competition were published in *A.J.* for July 27.

December 4.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor: Thomas S. Tait, F.R.I.B.A. Premiums: £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1.

December 15.—Messrs. Jenson and Nicholson invite designs for a scheme of interior and exterior decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1. Latest date for submission of designs: December 15.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Proposed extensions to the Town Hall, Swindon. Assessor: Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere A.R.I.B.A.

Proposed town hall and municipal buildings, Stoke Newington. Assessor: Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

THIS ARSHETECTURE

Yes, these persons "having a house built for them" are indeed fortunate.

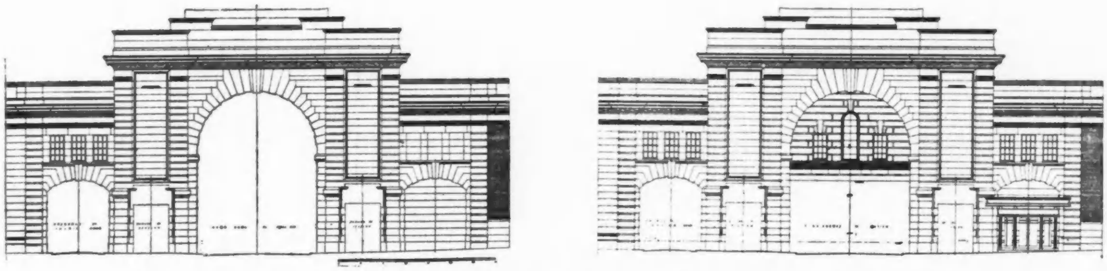
They can have a look round the districts they would like to live in, they can select a suitable plot of land possessing the advantages of good transport facilities, near-by shops and schools, and pleasant surroundings, and a place where they will be handy to their friends or relatives.

From the main features of the house down to the tiniest details the prospective owner can have his say.

In design he can pay a little more, and have one of those distinctive, artistic, beautifully proportioned houses which will cause his visiting friends instantly to exclaim: "How lovely."

Or he can pay a little less and have a quiet, unobtrusive design, a house striving for no special effect nor achieving any, but nevertheless a house of sensible taste, and good taste, too—an eminently practicable and value-for-money dwelling, even though it is less idealistic.—*Manchester Evening Chronicle.*

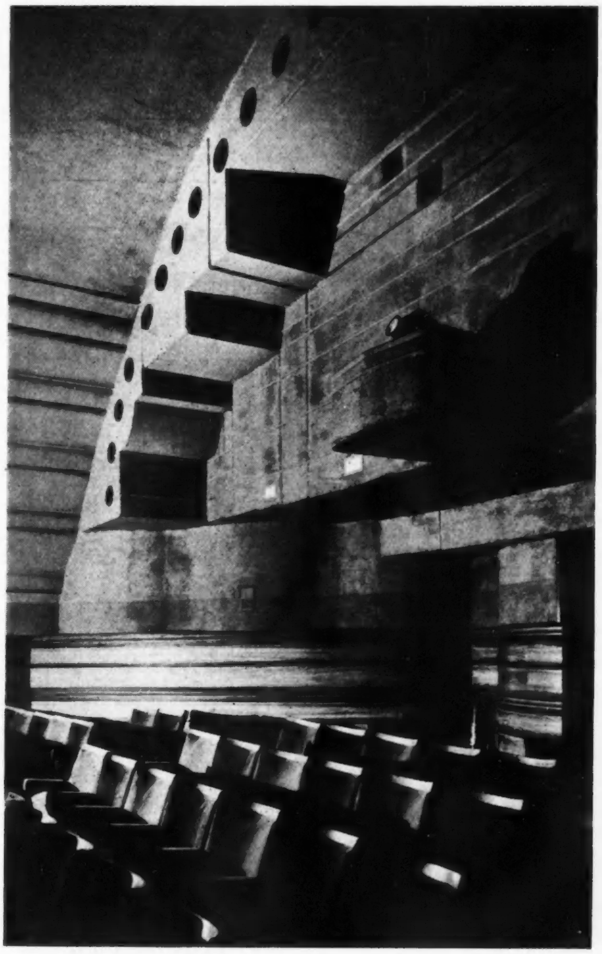
NEWS CINEMA, VICTORIA STATION



The station entrance in Buckingham Palace Road before and after the addition of the new cinema.

The design of this cinema presented several unusual problems in space economy and acoustic insulation. It has been built inside the existing roof of Victoria Station, with its entrance under an existing arch. To avoid continuity of structure and the consequent transmission of noise, the cinema roof had to be quite independent of the station roof; and is therefore, owing to the necessity of keeping the floor of the cinema high enough for vehicular traffic beneath, interlaced with the existing beams, but nowhere touching them. The cinema steelwork is supported on four stanchions from which the stage portion of the cinema is cantilevered out.

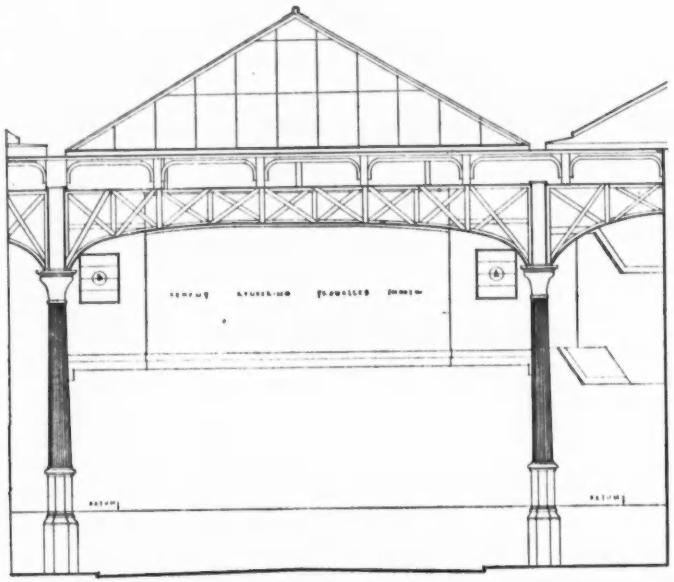
Ventilation also provided a difficult problem, as contamination of the intake by engine smoke, etc., had to be avoided. The ventilation plant is housed above the station roof on an existing ledge behind the screen wall of the entrance arch.



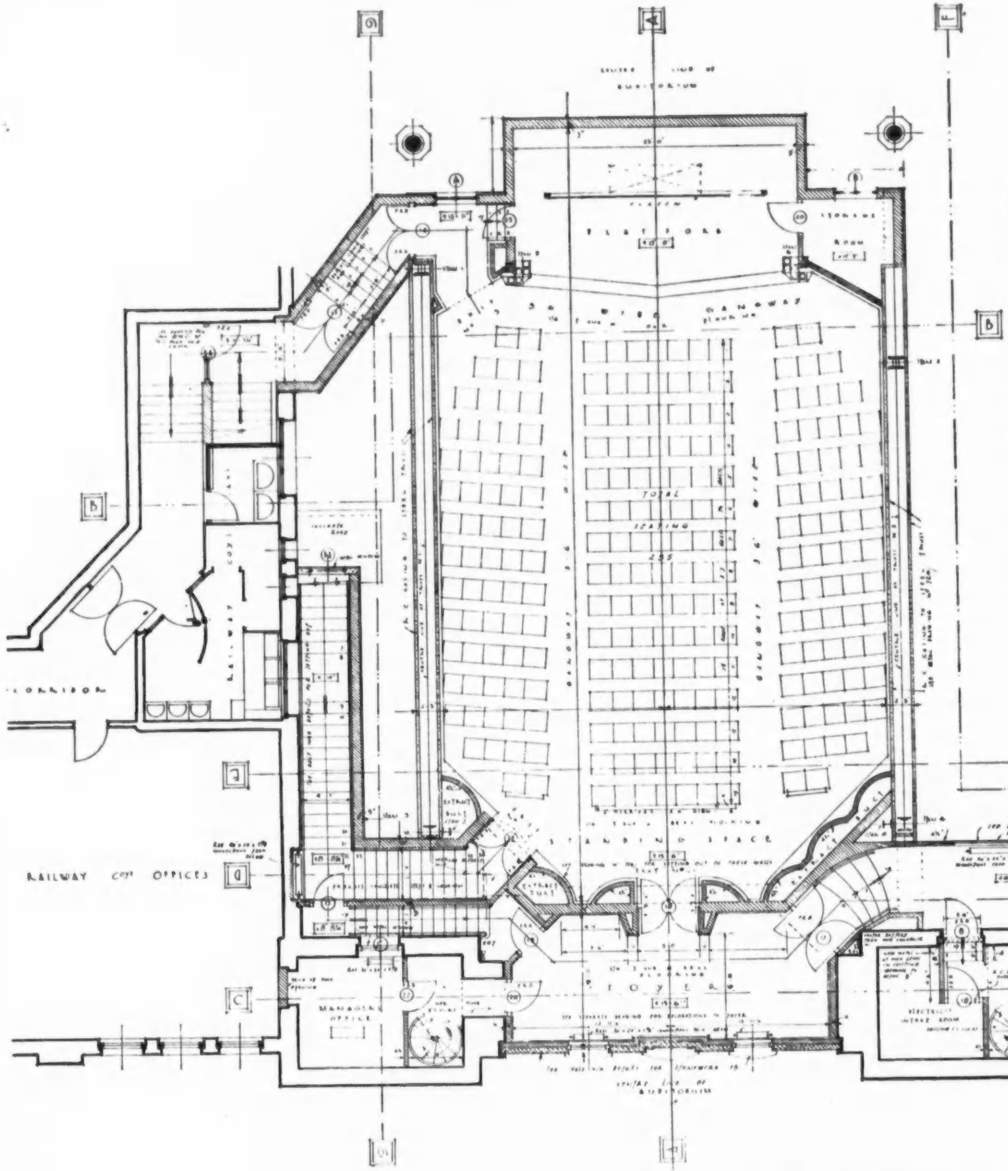
A view inside the auditorium showing the back wall and the air extract grilles.

DESIGNED BY ALISTER G. MACDONALD

NEWS CINEMA, VICTORIA STATION

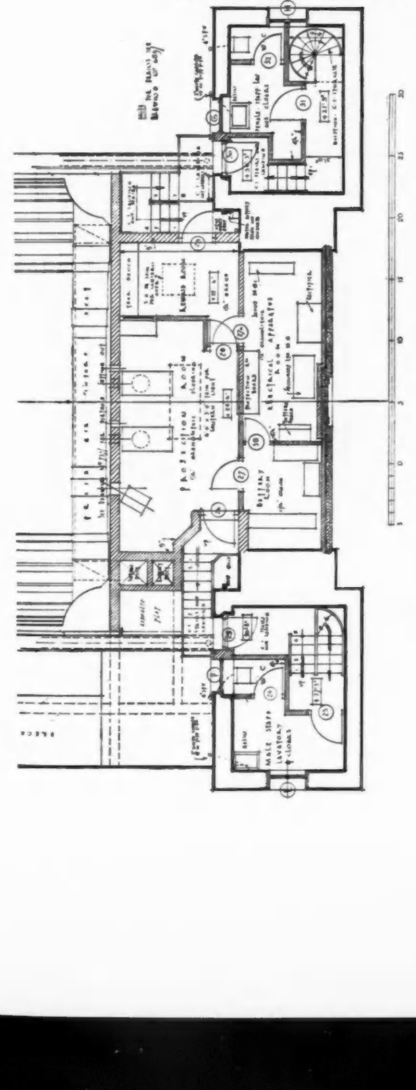


End elevation of the cinema showing the existing roof-structure of Victoria Station.

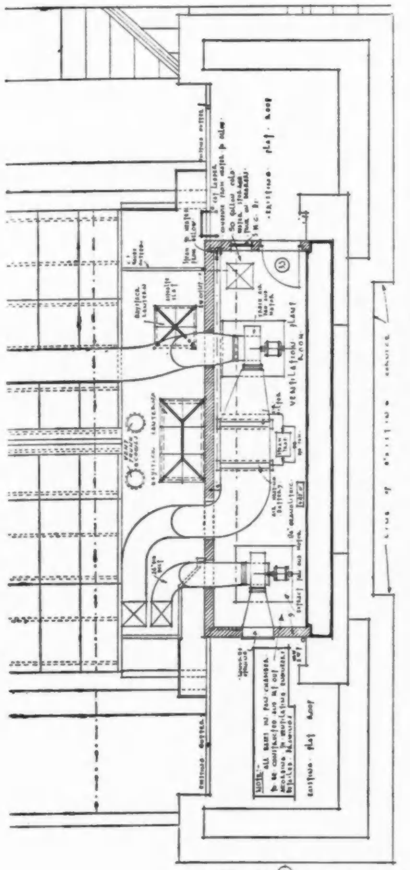

PLATFORM
GANGWAY
TOTAL SEATING 285
STANDING SPACE
FOYER
MANAGER'S OFFICE
ELECTRICITY INTAKE ROOM
CORRIDOR
RAILWAY COYS OFFICES
CONCRETE ROOF

Plan of auditorium floor.

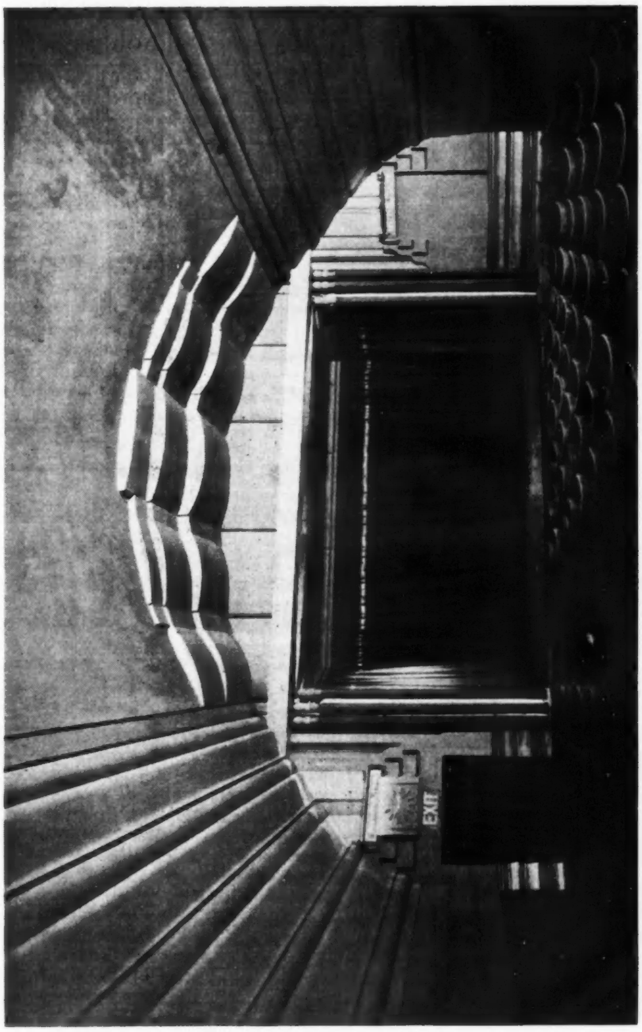
Plan of auditorium floor.


PROJECTION ROOM
ELECTRICAL APPARATUS ROOM
REWIND ROOM
MALE STAFF LAVATORY & CLOAKS

Plan at projection room level.


VENTILATION ROOM

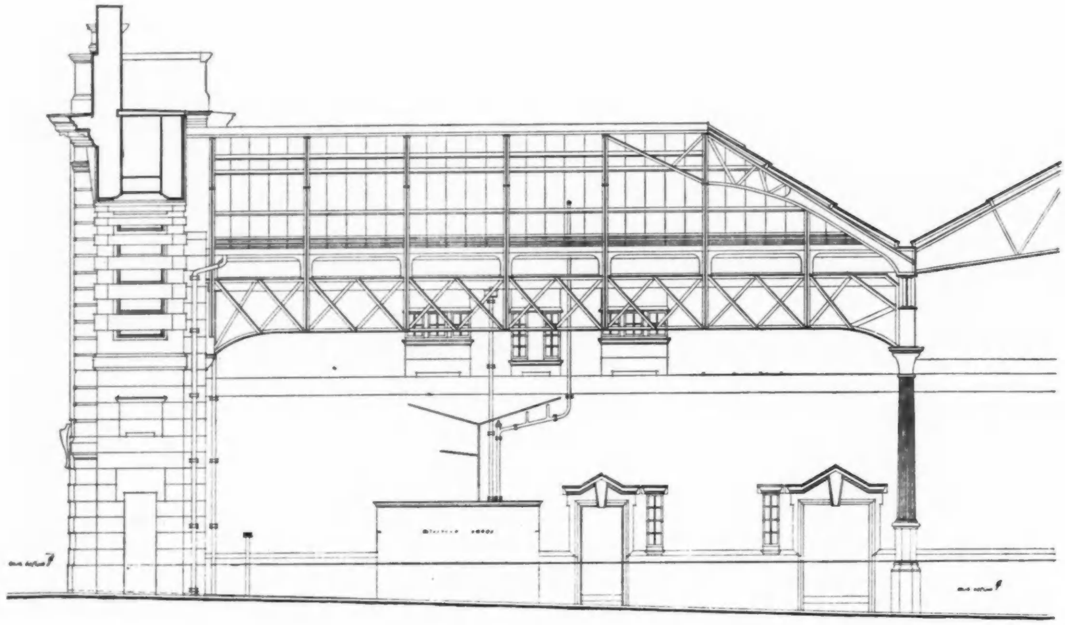
Plan through ventilating plant above level of station roof.



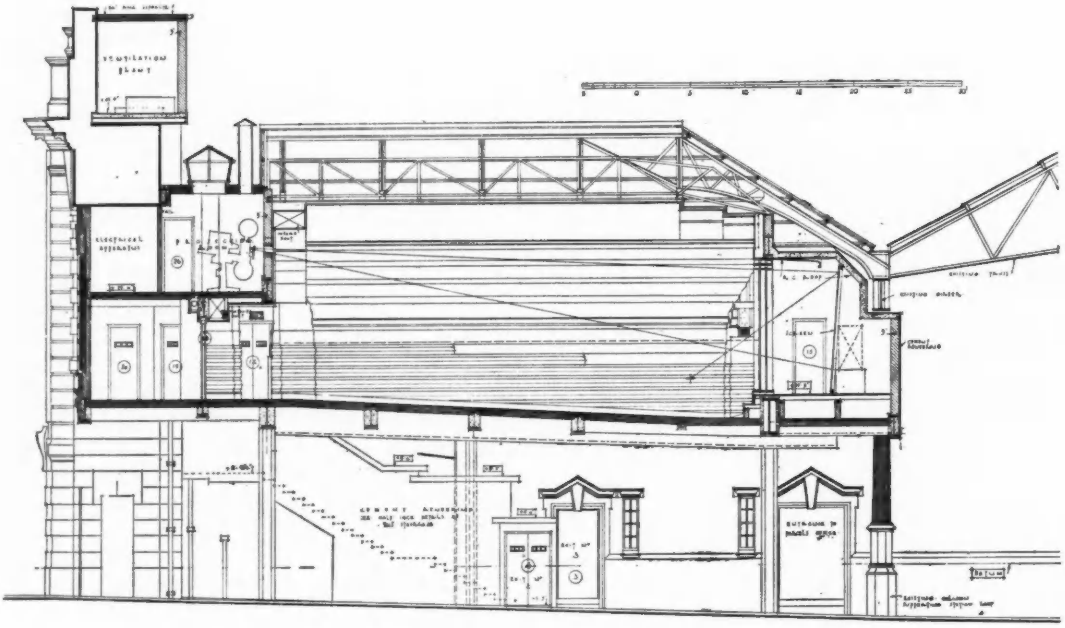
The auditorium.

DESIGNED BY ALISTER G. MACDONALD

NEWS CINEMA, VICTORIA STATION:



Section through the entrance arch before the cinema was added.


VENTILATION PLANT
ELECTRICAL APPARATUS
PROJECTION ROOM
SCREEN
EXISTING TRUSS
EXISTING GIRDER
EXIT No 3
0
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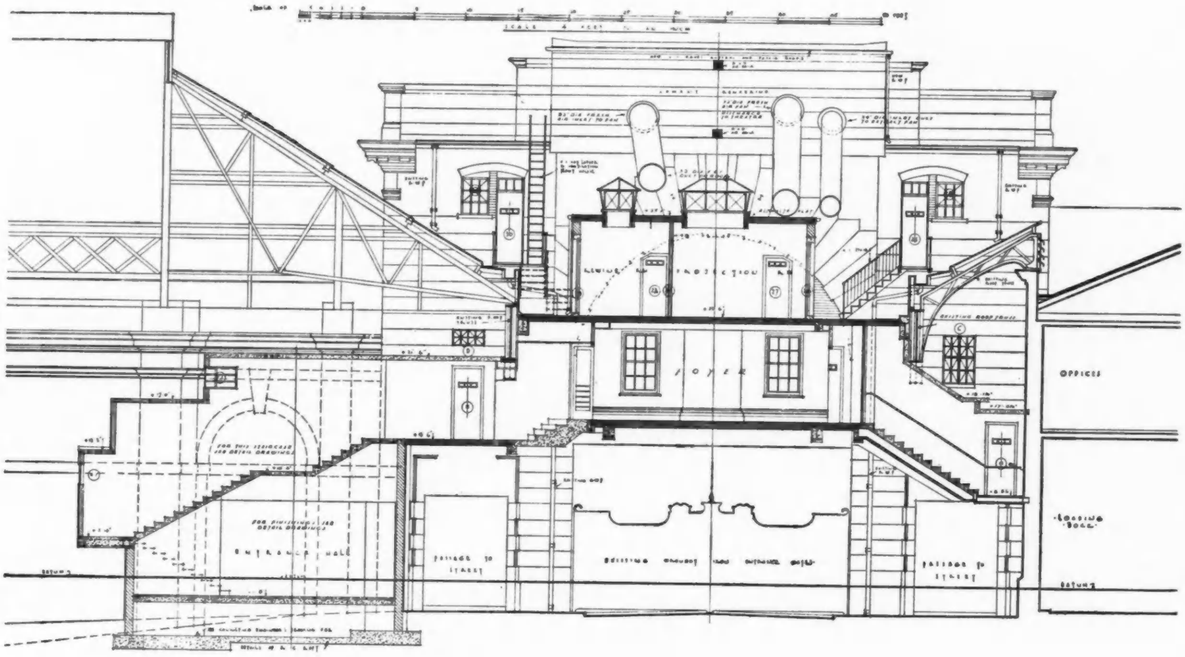
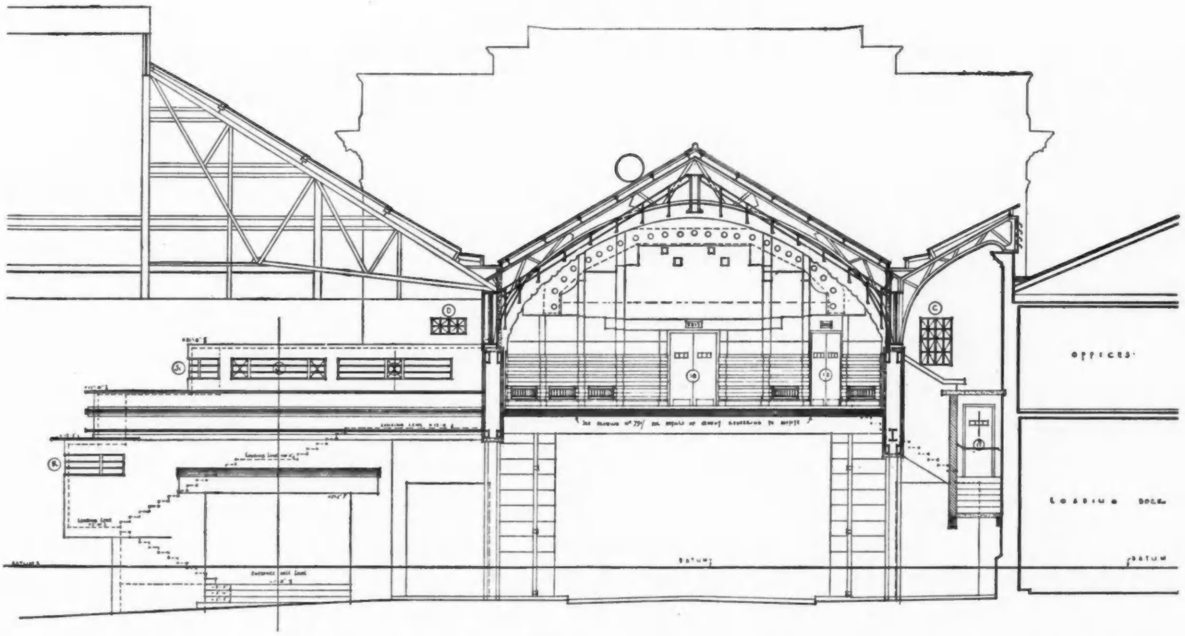
15
20
25
30

Longitudinal section through the cinema. The acoustic problem in such a position as this was an exceptionally difficult one. To avoid transmission of train noises, etc., the roof of the cinema is structurally independent of the station roof, and the bases of the stanchions are packed with soft material instead of concrete to insulate against platform vibrations. The floor is of pre-cast concrete beams covered with a 2 in. layer of thatchboard and screeded with ½ in. rock asphalt with wood finish. The ceiling is also of thatchboard suspended from steel girders and purlins.

DESIGNED BY ALISTER G. MACDONALD



Cross section through the projection room, foyer and entrance stairs.



Cross section through the auditorium, looking towards the entrance arch, showing the entrance staircase to the cinema in elevation. The double side-walls shown were used instead of concrete filling to provide additional insulation. The barrel-shaped ceiling was dictated by the limitations imposed by the existing station roof. This shape gives bad distribution of sound, with excessive concentration along the centre line and weak distribution along each side. However, owing to the directional effect of the loud speakers, it was possible to ignore any reflections of sound from the front half of the ceiling, and only the half furthest from the loud-speaker chamber was treated acoustically. The process adopted was to spray asbestos to a thickness of $\frac{5}{8}$ in. direct on to the thatchboard ceiling. The back wall surfaces facing the loud speakers are treated in the same manner. The finish thus obtained is a matt white surface, which is decorated with sprayed distemper, so as to match the plaster which forms the remainder of the ceiling and wall surfaces.

LETTERS FROM READERS

C. W. GLOVER, A.M.INST.C.E., L.R.I.B.A.

ROBERT A. IRVING

ALSO FORWARD

Decorative Treatment of Acoustical Materials

SIR,—With reference to the excellent review which appeared in your JOURNAL for August 24 on my book, *Practical Acoustics for the Constructor*, and to the reviewer's criticism to the effect that I appear to have overlooked the architectural repercussions in connection with various decorative treatments of acoustical materials as illustrated, I venture to point out that stencilling and applique decoration were illustrated more for the purpose of completeness than with the object of advocating these forms of treatment.

I agree with the reviewer that acoustical materials should be accepted frankly and their surfaces left undecorated. The carving illustrated in the book would appear to offer appropriate treatment when enriched decoration is desired. This, however, is a question upon which practitioners differ in their views, and it would be of interest to know the consensus of opinion in this respect.

CHAS. W. GLOVER

Slum

SIR,—I write to call your attention to a misprint on page 305 of your current issue, from which it would appear that in the Riverside district of Cardiff the number of persons per acre is only 5·25. This should of course be

$$\begin{matrix}\text{(pop.)}\\ \text{(acr.)}\end{matrix}\ \frac{17{,}602}{319} = 55{\cdot}2$$

ROBERT A. IRVING

[*The above correspondent is correct. The misprint was due to a printer's error.—Ed., A.J.*]

The B.I.F., Birmingham

SIR,—The addition, as announced in your last issue, of some 55,000 square feet of floor space to the next British Industries Fair at Birmingham, can only produce worse chaos than ever, unless a comprehensive plan is first agreed upon. Last year, when I visited the Fair, I was shocked by the absence of planning, which is no credit to a city that has for its motto "Forward." An up-to-date exhibition building in Birmingham, suitable for housing the "heavy industries," is surely needed now that this Fair has acquired such international importance.

ALSO FORWARD

LAW REPORT

RESTRICTION COVENANTS

Re Garratt's Hall Estate.—C. H. Garton, appellant. Chancery Division. Before Mr. Justice Clauson.

THIS matter came before the Court on an appeal by Mr. C. H. Garton against an award of an official arbitrator, allowing the development of land notwithstanding certain restrictive covenants.

Mr. J. A. Reid, on behalf of the appellant, Mr. Garton, said his client appealed against an order made by the official arbitrator, Mr. H. C. Webster, modifying restrictive covenants on certain land which fronted on Holly Lane and Garratts Lane, Banstead, on the application of the Garratt's Hall Estate, Ltd., of Sutton. The company had purchased certain land which they desired to develop by placing upon it houses of a lower value than that imposed by the covenants. Continuing, Counsel said his client purchased his land for the late owner of a girls' school at Garratt's Hall, and this land and that sold to his client were subject to restrictive covenants as to the value of property to be erected. The matter went before the official arbitrator who found in favour of Garratt's Hall Estate, Ltd. His submission was that there had been no satisfactory evidence before the arbitrator upon which he could make his order. The matter was not one of public interest, as his contention was that there was no housing shortage at Banstead. The matter was more or less a personal one, the object of the company being to develop their land on purely commercial lines. This was not a case in which the company had no knowledge of the restrictive covenants. They knew all about them and he urged that they could not now come before the Court and say that as they had changed the character of the property, the restrictions were not now valid and that the decision of the arbitrator should be upheld. His client and others had spent large sums on property and he asked the Court to say that the restrictive covenants were still binding on the Estate Company.

Mr. Grover, K.C., appeared for the Estate Company but was not called upon to argue the case, the Court dismissing the appeal with costs.

His Lordship, in giving judgment, said the appellant was the owner of a large and beautiful country house in the neighbourhood in question and he desired that the restrictions should remain in force. The arbitrator had had a considerable body of evidence before him and had found that since 1928 there had been a large change in the character of property in the neighbourhood. The Estate Company had erected houses of a somewhat lower standard on some of the land, and the arbitrator came to the conclusion that whatever the history of the change might be, there had been in fact a change since 1928. Having regard to all the evidence before the arbitrator which His Lordship had read, he would have arrived at the same conclusion and therefore he dismissed the action with costs.

Architecture of the Future

Mr. E. Maxwell Fry, A.R.I.B.A., in a letter to *The Times* for September 8, under the above heading, said: Years ago M. André Lurçat, the distinguished French architect, was explaining the necessity that forced young architects to talk and write on the larger aspects of architectural change while they could provide as examples buildings of only minor category, mainly in the field of domestic architecture.

Forced by circumstances, such men poured the concentrated essence of long and often frustrated thought into these minor works; and nothing was easy, accepted, or natural. Surely there is the very closest connection between the "lesser structures" and the "real problems" of architecture today? The trouble is that we are, in this country, without enough of either lesser or greater to provide a background for a planned achievement, the "time lag" bearing heavily upon our wickedly conservative natures. More than anything else we require the humility to be instructed in, and the courage to undertake, the new forms of architecture fitted to this opening new age.

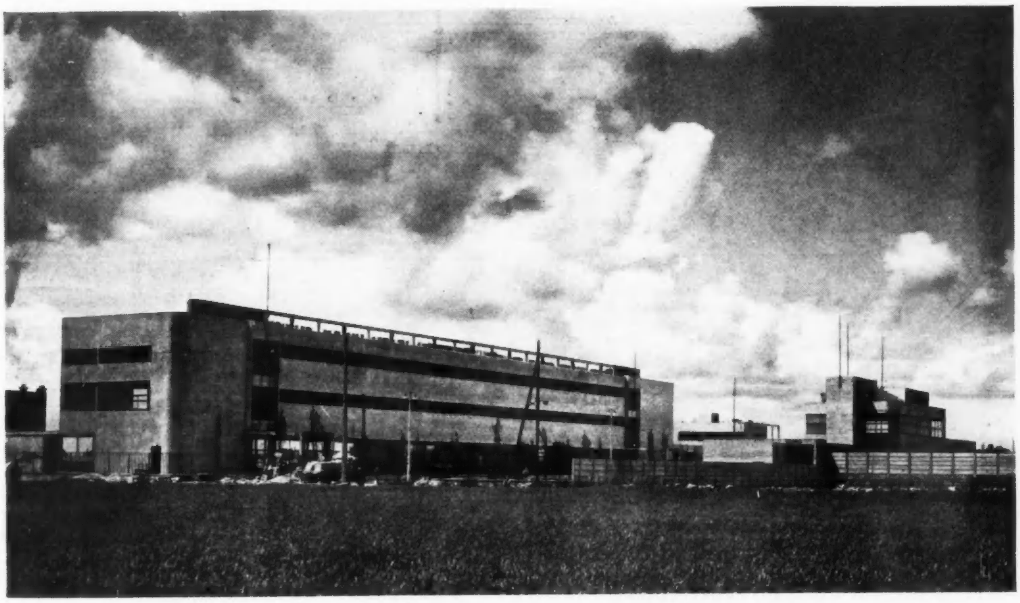
New Lisburn School

At the monthly meeting of the Lisburn and Belfast Regional Education Committee, Mr. H. A. M. Barbour, M.A. (chairman), presiding, the Ministry of Education wrote approving of the plans for the new Lisburn P.E. School, to be erected on the Dublin Road, subject to amendment in accordance with a report of the Ministry's Technical Adviser. The estimated cost of £17,250 (exclusive of equipment) was considered reasonable.

Change of Address

Mr. A. O. Chatterley, B.ARCH., A.R.I.B.A., has changed his Birmingham business address to 41 Water Street, Birmingham 3. Telephone No.: Central 8184.

A SCHOOL NEAR PARIS

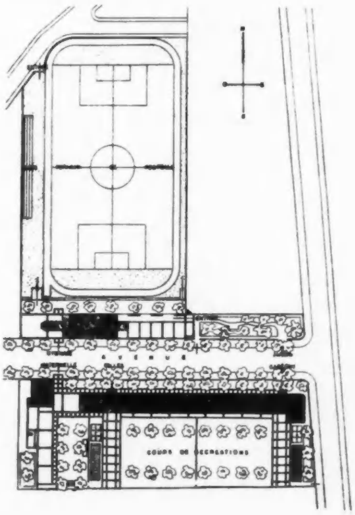


The school from across the avenue.

DESIGNED BY ANDRÉ LURÇAT

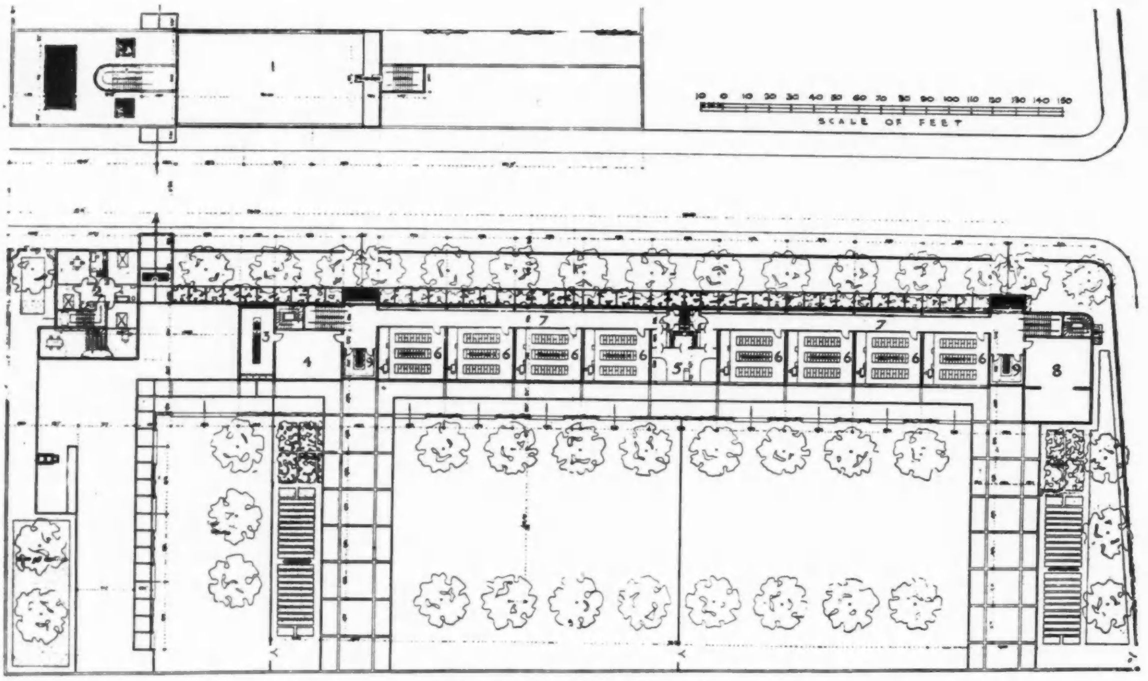
The design for this school, to accommodate 800 children, for the Communist Municipality of Villejuif, near Paris, was the subject of a competition, in which André Lurçat was successful. The credit voted was 8,000,000 francs, about, at that time, £100,000.

The disposition of the buildings was dictated by an avenue which crosses the site. The school block, as will be seen in the adjoining block plan, is on the south side of the avenue, and the gymnasium and sports ground on the north; they are connected by a subway.



The school from the south.

A SCHOOL NEAR PARIS:


SCALE OF FEET
10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
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FIRST FLOOR PLAN

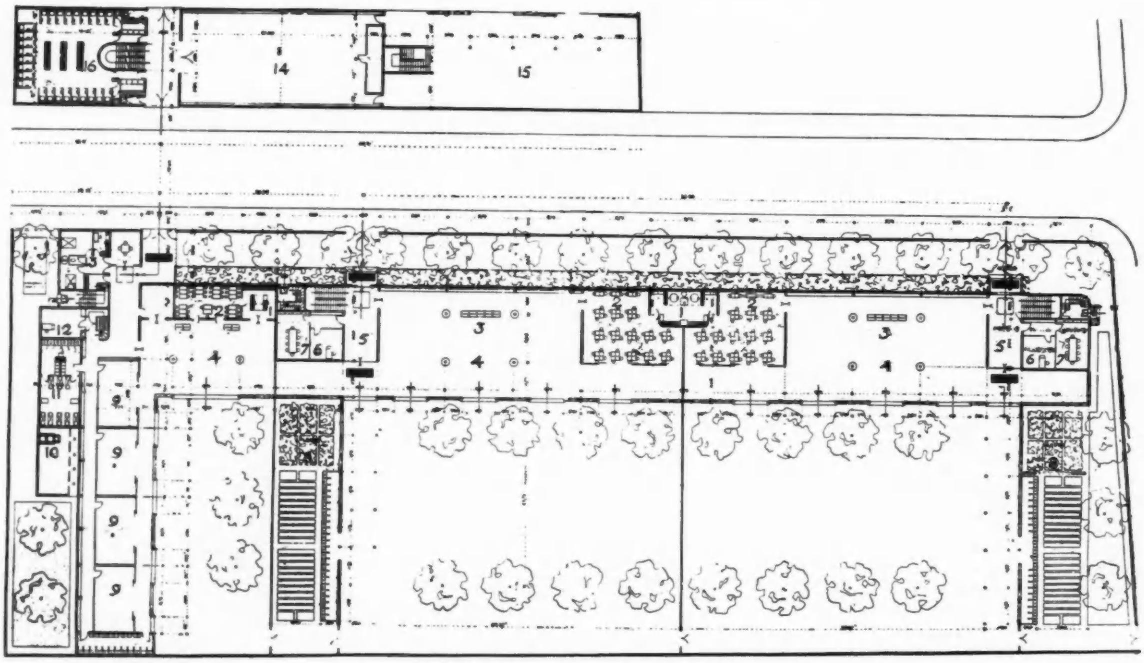
KEY TO THE ACCOMMODATION

GROUND FLOOR

1. Kitchen.
2. Dining room.
3. Wash room.
4. Covered playground.
5. Waiting room.
6. Headmaster or Headmistress.
7. Administration.
8. Flower room.
9. Classroom.
10. Fuel.
11. Sleeping room.
12. Doctor's room.
13. Concierge's lodge.
14. Gymnasium.
15. Shelter.
16. Shower room.

FIRST FLOOR

1. Gymnasium roof-terrace
2. Headmistress's flat.
3. Kitchen.
4. Sewing room.
5. Doctor's room.
6. Classroom.
7. Corridor.
8. Studio.
9. Storage.


16
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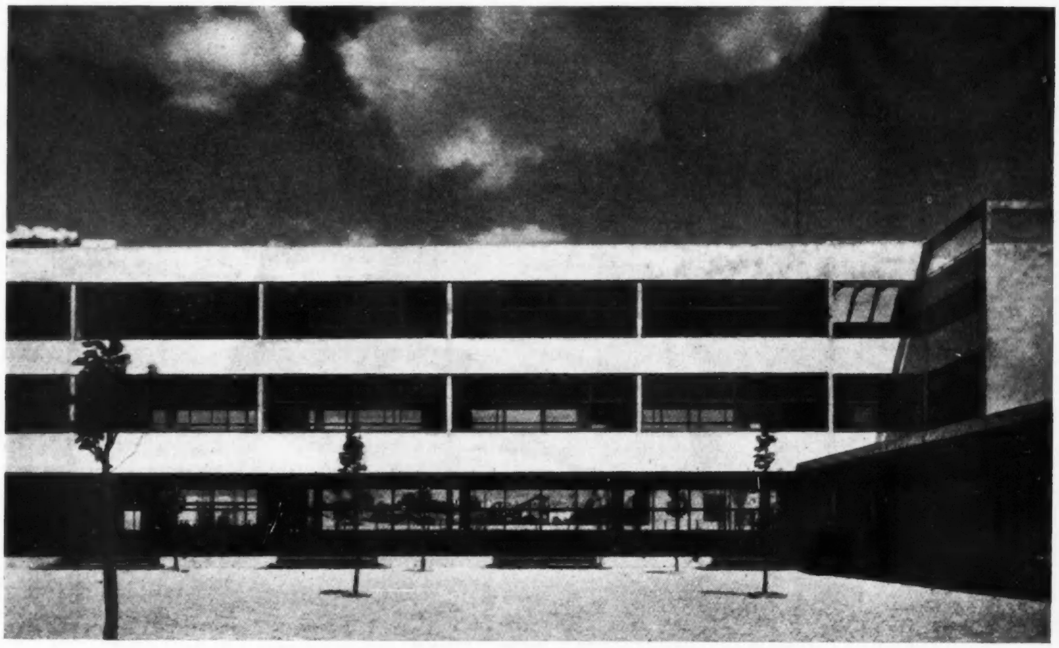
GROUND FLOOR PLAN

DESIGNED BY ANDRÉ LURÇAT

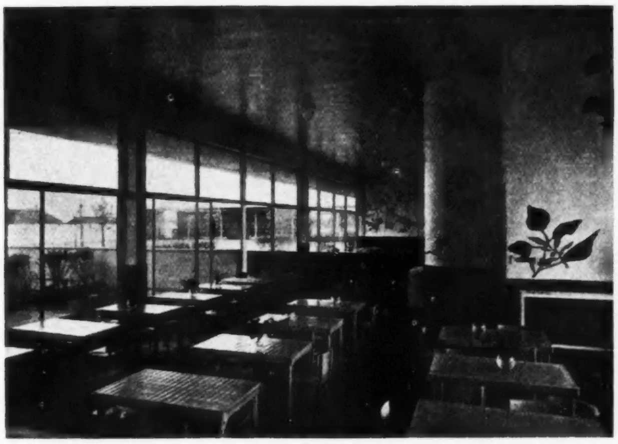


The main block from the playground.

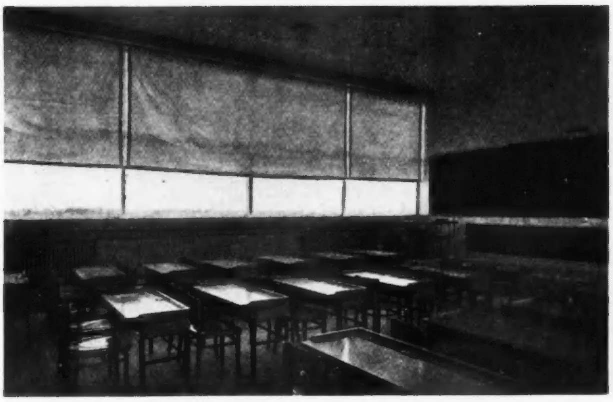
The long building, running parallel with the avenue, contains the boys' and girls' classrooms, with their common services, such as the kitchen, dispensary and studio, in the centre. The corridors are on the north and the classrooms on the south, looking on to the playgrounds. The école maternelle *or kindergarten runs at right angles to the main block, protecting the playgrounds from the prevailing wind. The concierge's lodge, projecting on the avenue side of the main block, commands the whole building. The gymnasium, with changing rooms, etc., adjoin the sports ground across the avenue.*

The furniture was entirely designed by the architect. The cinema and radio are installed in each classroom, and the gymnasium can be converted into a cinema. On the terrace is a roof-garden with provision for sun-bathing, the children being protected from the north by a pergola and shrubs.

The building is constructed with a reinforced concrete frame and infilling of pre-cast blocks. The whole of the exterior is rendered with white rough-cast. All pipes are concealed; and heating pipes and electric cables had therefore to be laid during the course of construction, the plumber and electrician in each operation preceding the mason and concretor. The rain-water pipes from the flat roof pass down the centre of the columns.

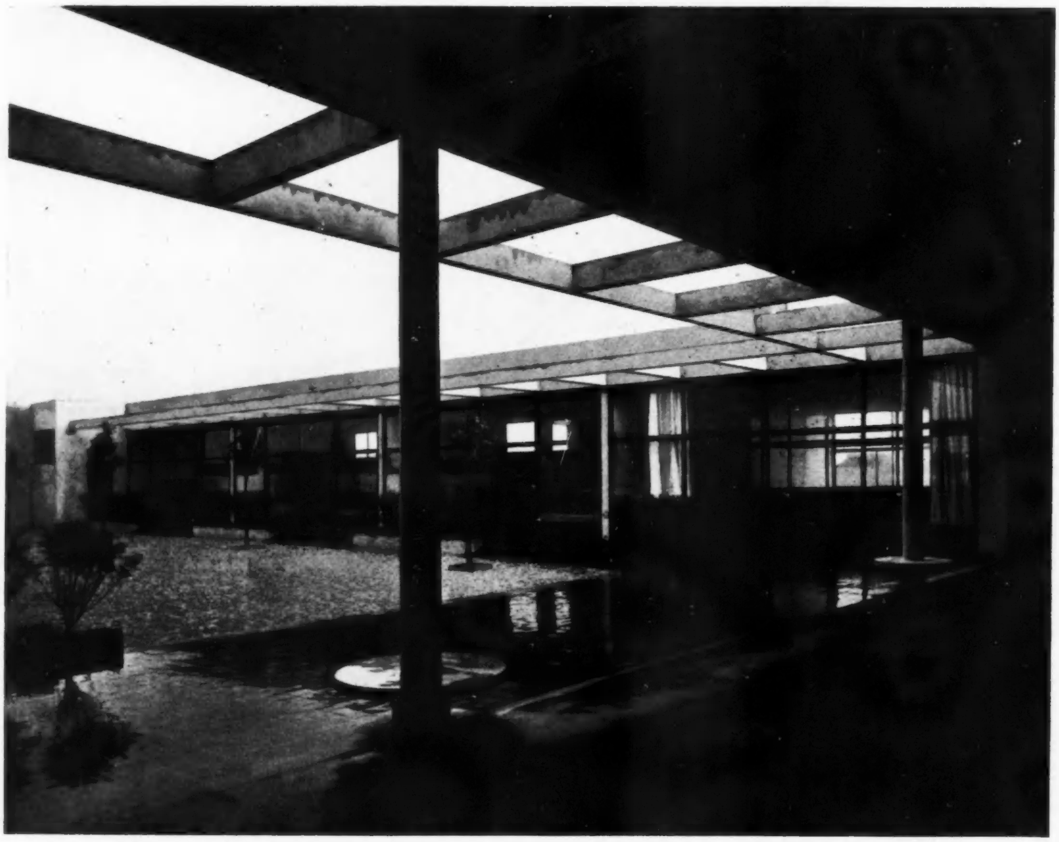


The dining room.

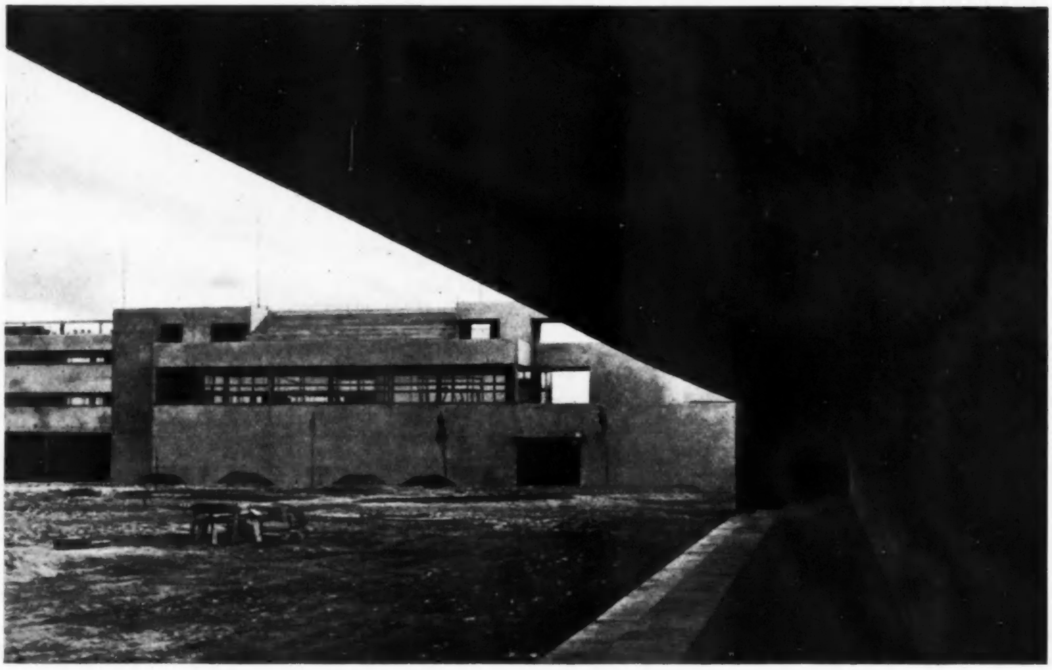


One of the classrooms.

A SCHOOL NEAR PARIS:

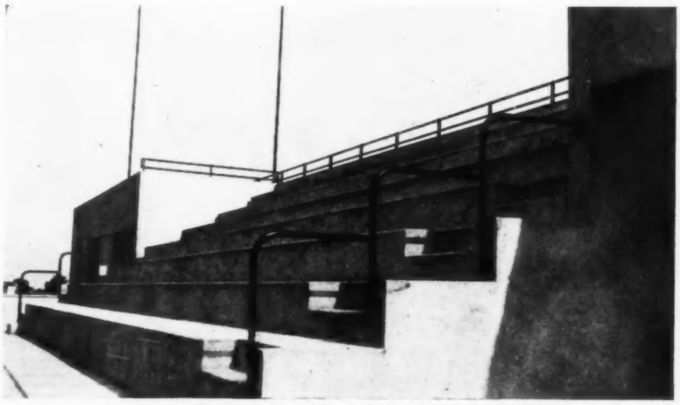


The "école maternelle" from the covered playground.



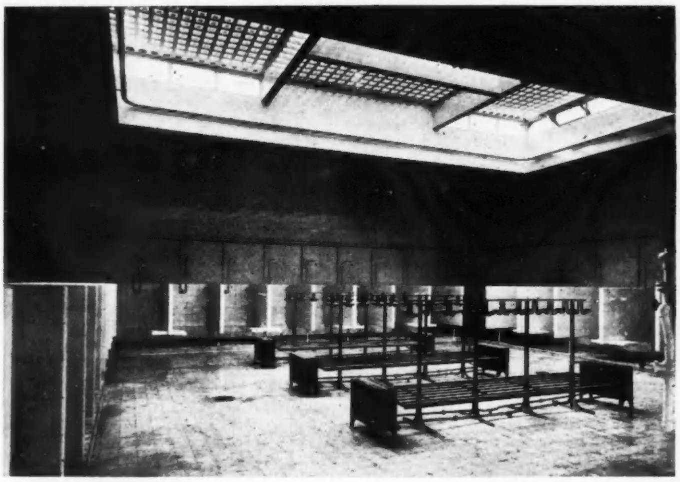
The playing field shelter and the gymnasium block.

BY ANDRÉ LURÇAT



The terrace above the gymnasium block.

The interior of the gymnasium.



The shower room in the gymnasium block.

TOWN PLANNING *SUMMER* SCHOOL

Below we print extracts from the opening address by Mr. G. L. Pepler, Past-President of the Town Planning Institute, delivered on Tuesday afternoon at the Town and Country Planning School, now in progress at Welwyn. Besides giving an indication of the scope of the subjects being discussed at Welwyn, it also provides a timely summary of the present position of town planning in this country.

Town and Country Planning

[*By G. L. Pepler*]

THE chief object of planning has been said to be : to secure that all land shall be put to its most productive use in the interest of the community as a whole, with due regard to health, convenience and amenity and to the rights of property.

The first essential is that local authorities, landowners, business men and all concerned, should co-operate in devising a general policy in respect to land development. The next, that the machinery of planning—namely, planning schemes—should be so designed as to give the fullest possible effect to the policy of conservation and development which it is desired to carry out.

How does the new Town and Country Planning Act appear to help ?

1 : It has brought the country into planning and has laid emphasis on the importance of protecting existing amenities.

2 : It brings all land within the scope of planning schemes, subject only to the Minister of Health being satisfied that adequate reasons for planning exist in conformity with the wide terms of Section 6. (N.B.—On August 1, 1933, 766 local authorities had already surmounted this first stile in respect to a total area of 10,378,434 acres—more than a quarter of the total area of England and Wales.)

3 : It has made it possible to supplement regional schemes prepared by joint committees, by supplementary schemes.

4 : It has specifically provided that schemes may include provisions with respect to buildings and building operations (other than buildings connected with certain agricultural uses : (*a*) regulating the size, height, design and external appearance of buildings ; (*b*) imposing restrictions upon the manner in which buildings may be used ; (*c*) prohibiting or regulating building operations.

5 : It has introduced the "General Development Order" method of prohibiting or restricting building operations, subject to triennial review, in respect of land to build on which would involve either (*a*) danger or injury to health by reason of the lack of roads, sewers, water supply or any public services and for which the provision of the necessary services would be premature or likely to involve excessive expenditure of public money, or (*b*) the likelihood of serious injury to the amenity of the locality.

6 : With regard to the items of a scheme which may be made exempt from compensation, it has made clear that these include regulations respecting the use, size, design or external

appearance of buildings, and, in addition, appears to have extended the list to include provisions which :—

(*a*) prohibit or restrict building operations pending the coming into operation of a general development order :

(*b*) prohibit or restrict building operations permanently on the ground that, by reason of the situation or nature of the land, the erection of buildings thereon would be likely to involve danger or injury to health, or excessive expenditure of public money in the provision of roads, sewers, water supply or other public services :

(*c*) prohibit the use of land for a purpose likely to involve danger or injury to health or serious detriment to the neighbourhood :

(*d*) regulate the height and position of proposed walls, fences or hedges near the corners or bends of roads, other than existing main roads :

(*e*) limit the number, or prescribe the sites, of new roads entering a classified road or road intended to be classified :

(*f*) prescribe building lines on land unbuilt upon for five years subsequent to the first effective planning step taken by the authority :

(*g*) require "lay-bys" for loading or unloading or fuelling vehicles in front of new buildings intended to be used for purposes of business or industry :

(*h*) provide for control of advertisements, in accordance with Section 47.

7 : It increases Betterment from 50 per cent. to 75 per cent., but makes recoupment postponable until the disposition of the property or change of its use.

8 : It enables Government Departments in charge of Crown Lands to enter into agreements, with the approval of the Treasury, in order to secure that such lands shall be laid out and used in conformity with the general objects of a scheme.

9 : It gives immediate effect to agreements entered into between landowners and local authorities.

10 : It specifically enables a scheme to include provisions for preserving single trees and groups of trees or for specifying areas of woodland to be protected.

11 : It adds, *inter alia*, to the schedule of matters to be dealt with by schemes :—(*a*) the reservation of land as sites for aerodromes ; (*b*) the prohibition, regulation and control of the deposit or disposal of waste materials and refuse.

12 : Planning authorities are saved the considerable expense of "referencing," but owners get earlier notice.

This does not pretend to be anything like a complete or exact list and does not refer to various safeguards which accompany the new powers, e.g., that only subject to claims for compensation can the maintenance or existing use of existing buildings be interfered with, or rebuilding restricted below a cubic content above ground level equal to that of the building existing before the material date.

However, taking this partial list and bearing in mind its limitations, what changes is it likely to make in the form of scheme with which we have all become familiar ?

SURVEY

The first point that occurs to one is that the need for careful preliminary survey and for early consultation with interested parties is now even more emphatic than before. For example, in town centres the planner must learn all about the changes that have been taking place and about existing uses and cubages ; in the country he must study soils and subsoils with a view to discovering land liable to periodic flooding, heavy clay in which cesspools would be liable to overflow and therefore, if unavoidable, should be kept far apart, sites suitable for sewage disposal works and areas they would serve by gravitation, land liable to subsidence, soils of special agricultural value, outstanding scenic features, etc. ; water bearing formations or catchment areas with a view to protecting sources of supply ; positions, extent and capacities of existing or projected services such as water, electricity, gas, sewers, etc.

COUNTRY PLANNING SCHEME

Prior to the coming into operation of the new Act, several authorities had tentatively prepared, with the friendly co-operation of the principal landowners, a form of scheme which would seem naturally to evolve into some such form as follows, under the new Act :—

First, areas will be selected for development taking into account existing towns, villages and settlements, availability of services or possible economic provision thereof, etc. The areas selected being sufficiently large to accommodate any development likely to take place within say, the next twenty years, round each centre.

Adjoining such areas, further land, say, sufficient to accommodate any development likely to take place within a further thirty years (50 years in all) will be selected as to be available for building operations but only upon the issue of a "general development order" (Section 15) by the authority : or if an owner can show (Section 16) that other suitable land is not available on reasonable terms and that the proposed operations would not involve danger or injury to health by reason of the lack of roads, sewers, water supply or any public services and that the provision of the necessary services would not be premature, or likely to involve excessive expenditure of public money ; or that the operations would not be likely seriously to injure the amenity of the locality.

These two areas, which comprise the probable ultimate building development, will then be zoned in the usual way, namely, as to type of building (residential, industrial, commercial, etc.), number of houses per acre, size, height, design and external appearance, etc., and areas required for open spaces or allotments will be reserved, and the use of land for any purpose likely to involve danger or injury to health or serious detriment to the neighbourhood will be prohibited.

Having selected areas for development, the authority will then probably turn its attention to areas to be permanently preserved from building or on which building operations must be severely restricted, either because (Section 19 1 (e)) by reason of the situation or nature of the land, the erection of buildings thereon would be likely to involve danger or injury to health, or excessive expenditure of public money in the provision of roads, sewers, water supply or other public services (e.g., land liable to flood or land above water supply level, or catchment supply areas either above or below ground) ; or the reason for selection may be the conservation of particularly fertile land for agricultural use or the preservation of a beauty spot by means of either private or public open space reservation.

In many cases it is likely to be found that the bulk of the area will lie between these two extremes of land suitable for building development and land which it is desired to keep free from building operations. As to this land, all that will be desired will be to maintain its rural character and this may be achieved by zoning it as a rural area but allowing freely, in addition to agricultural buildings, the erection of houses with large grounds (say, 5 or 10 acres, as houses on holdings of this size should be able to take care of themselves, *re* public services ; in this respect, it is the size of the holding that is of importance, not the size of the house ; it is not intended as a rich man's preserve), public buildings such as sanatoria, and possibly certain buildings connected with rural industry. All buildings, save those connected with agriculture in the limited sense referred to in Section 12(3), to be controlled in respect to design and external appearance.

In addition, it is probable that provision will be made for reserving routes for certain new roads, for widening existing roads, the prescription of building lines, and the stopping up or diversion of some existing highways.

Also, general provisions may be included to regulate, in the interests of safety, the height and position of proposed walls, fences or hedges near the corners or bends of roads (other than main highways which can be dealt with in this way under the Roads Improvement Act, 1925) ; and to limit the number, or prescribe the sites, of new roads entering a classified road or a proposed road of classification value ; and to require the provision of accommodation for loading, unloading or fuelling vehicles in front of new buildings intended to be used for purposes of business or industry, with a view to preventing obstruction of traffic on the highway.

Also, it may be that it will be desirable to reserve the site of an aerodrome.

Other general provisions likely to be included are powers as to the preservation of trees (Section 46) ; and powers to control advertisements in specified areas (Section 47).

TOWN PLANNING SCHEMES

We are all familiar with the scheme relating to the immediate environs of a town. This type of scheme often included a good deal of built-upon land and is now likely to include more. Also, it is probable that not so much land on the outskirts will be treated as though ripe for building and that "general development order" procedure may be applied to some of it.

As regards the cores of towns, some were fashioned before the age of trains, most before the motor era or the age of steel construction, and all before the coming into its own of air transport. Towns have either to adapt themselves to take advantage of new forces, or succumb to them. In many there are things—sometimes whole quarters—of beauty or of historic interest that we should like to see preserved and in some cases we should like to clear away subsequent incongruous growths that hide these treasures ; often traffic and inappropriate uses hamper free movement and efficient use of central parts ; sometimes slums exist ; usually, parking places and internal playgrounds are lacking ; frequently one finds semi-derelict areas cheek by jowl with most important centres, areas that would well repay reconstruction on modern lines could the ownerships be consolidated.

Obviously the first thing to do is to study the town and come to as definite a conclusion as one is able as to the best that can be made of it ; secondly, to decide what is practicable and the powers available for each item.

Something more than statutory planning seems to be required ; by word, plan and picture the townsmen should be clearly shown a practical ideal to aim at so that civic pride may be aroused and its driving force applied and a guide be provided for all operations, either private or public, under the powers appropriate to the particular project.

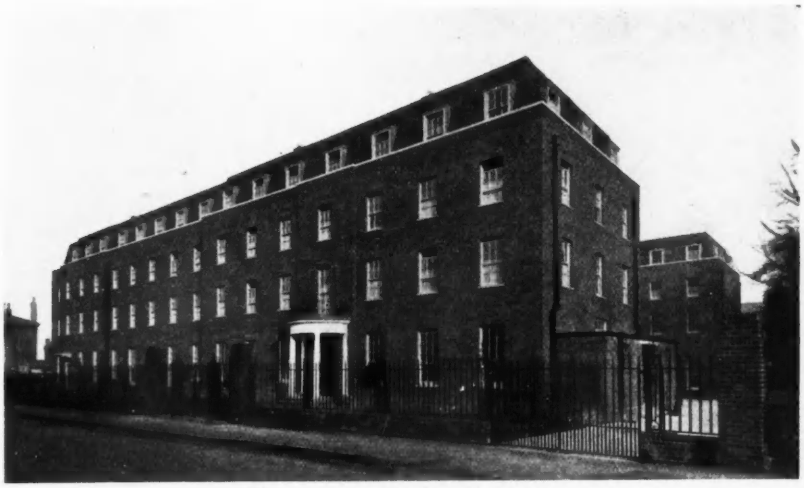
The main limit of the scope of the statutory scheme is likely to be that of cost, and in this connection one must take into account the fact that, while, apparently, no compensation will be involved in maintaining the *status quo* and in preventing undesirable changes in the future, provisions introducing improvements into built-upon areas will have to be paid for, subject, of course, to recoupment from betterment.

The position as to existing buildings, between the date when the resolution to plan takes effect, and the date on which the scheme comes into operation, and as to compensation, is described in the summary of the provisions of the Act issued by the Ministry of Health.

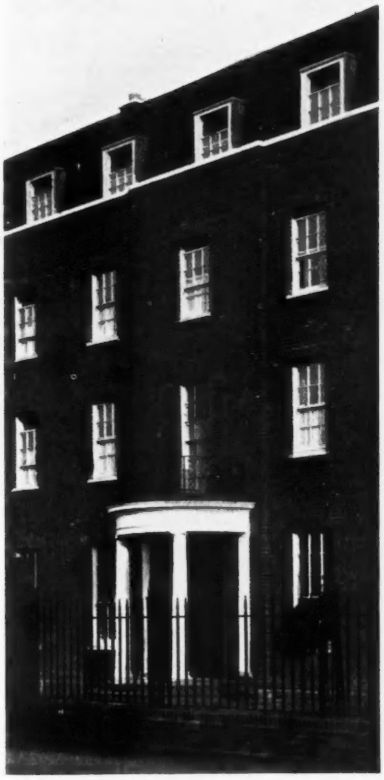
It appears from this summary that full planning powers can be exercised equally over all parts of the area of a scheme, whether built-upon or not, and that, generally speaking, the special references to existing buildings in the Act are mainly directed to protecting rights in buildings or their uses or the sites of buildings existing

(*Continued on page* 334.)

NURSES' HOME AT BIRMINGHAM

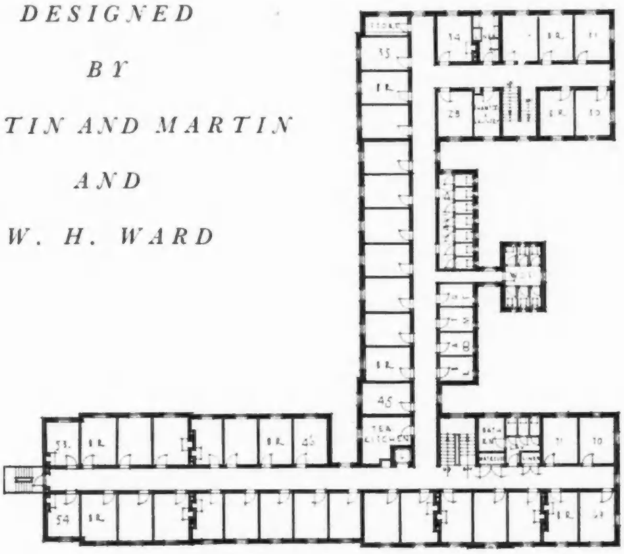


The street front.



The main entrance.

DESIGNED
BY
MARTIN AND MARTIN
AND
W. H. WARD


STORE
33
34
BR
28
29
30
BR
TEA KITCHEN
BATH RM
45
53
54
70
71
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20
30
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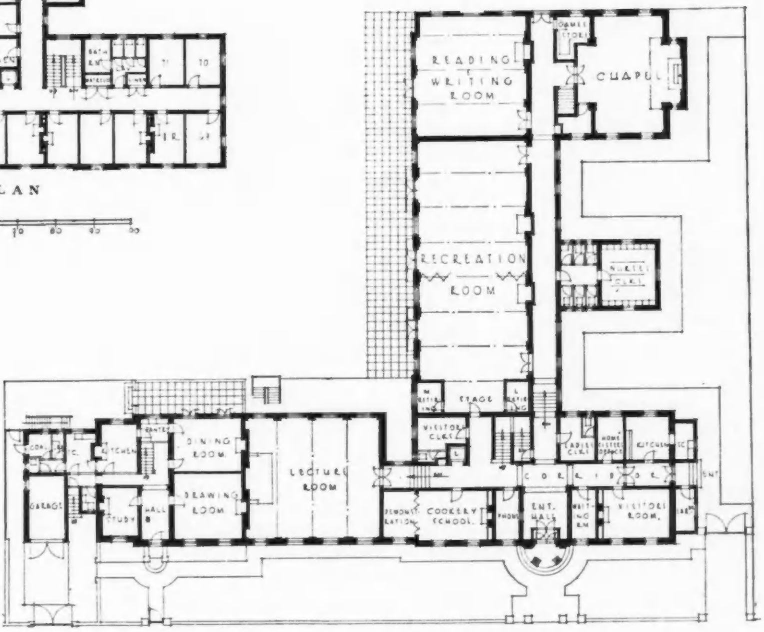
60
70
80
90
100

UPPER FLOOR PLAN


READING & WRITING ROOM
CHAPEL
GAMES STORE
RECREATION ROOM
NURSES' CLKS
STAGE
M RETIRING
L RETIRING
VISITORS' CLKS
COAL
KITCHEN
PANTRY
DINING ROOM
DRAWING ROOM
LECTURE ROOM
GARAGE
STUDY
HALL
DEMONSTRATION
COOKERY SCHOOL
PHONE
ENT. HALL
WAITING RM
VISITORS ROOM
LADIES' CLKS
HOME SISTER'S OFFICE
KITCHEN
CORRIDOR
ENT

GROUND FLOOR PLAN

The nurses' home provides accommodation for 120 nurses, and is in connection with the children's hospital that adjoins it. The building is finished with rustic multi-coloured Black Country facing bricks.

The whole of the ground floor is taken up with the administrative offices, recreation rooms and teaching school, and the three upper floors are devoted to bedrooms. The residence of the house governor forms part of two floors, but is completely detached as regards access.

at the time when the statutory planning scheme was begun.

It may be that in some cases where reorganization of central parts is economically imperative and considerable compensation unavoidable, local authorities will be well advised to give consideration, as a possible alternative, to the powers of purchase contained in Section 25.

The application of *status quo* principles may appear attractive from the point of view of avoiding compensation and may be rightly applicable to some parts of a town, but, generally speaking, what most of our towns appear to need is reorganization to fit them not only to cope with but to take full advantage of the new forces and methods of construction now available.

The scriptures remind us to be wary of putting new wine into old wine-skins or of patching old garments with undressed cloth, and it seems that what we have to do is to renew those parts where change is desirable.

To change or intensify use without regard to the effect on the town as a whole, or particularly on neighbours; or to the provision of the necessary extra elbow room, must produce chaos: and one of the things requiring most careful consideration is the relation between height, cube and floor space of buildings of various kinds and the surrounding open ground space needed for light, air, transport, movement of people, etc. Only when full consideration has been given to this relationship will the planner be able to frame his scheme so that progressive changes may be provided for, but only in an orderly, neighbourly, and progressive manner and without the rude disturbances which have characterized such changes in the past.

LITERATURE

ARCHITECTURE AND THE PUBLIC

[*By James MacQuedy*]

London Buildings. By Frank P. Brown, A.R.C.A.(LOND.)—Vol. 1 of the *English Art Series.* London: Sir Isaac Pitman and Sons, Ltd. Price 7s. 6d. net.

BOOKS like this, presumably, are written for a purpose; for the history of the familiar London landmarks (which are the ones here described) is given again and again in the guide-books, and does not ask to be repeated. But in this case the purpose is hard to find. There is no indication of any particular public at which the book is aimed, or—more important—of any architectural message it is meant to convey. Nor does the preface give us any help. It plunges immediately into the question in hand—London buildings.

"London buildings," it begins, "are the background to the story of English Art. We do not know whether in the early days of our civilization such gigantic columns with their entablatures as those at Stonehenge were ever erected in the London area, but it is assumed that a Roman building of considerable size stood on Thorney Island, the ancient site of Westminster Abbey. There are other things which indicate the places of settlement and ingenuity displayed by the Romans—city walls, *mosaics*, etc.—during their four hundred years' occupation."

And so on, up to the present day:

"The present period is remarkable in the story of our National Art. English people take keen delight in examining works by great architects, sculptors, and painters, which was abundantly proved by the huge daily attendances at the International Art Exhibitions held in London.

"The capacity for producing beautiful things is just as prevalent: there is no dearth of artistic talent. The earth, with its great mountains, winding views, majestic trees, and beautiful flowers, is the embodiment of perfection—it is the gift of Nature to man, who, in his own way, constantly endeavours to beautify his surroundings. Nature is one thing and Art another. They are not at variance, for 'Nature is the Art of God.'

"Whatever fluctuations society may suffer Art will never perish. The higher attributes of the soul are never subject to the spasmodic and abortive struggles of nations seeking a social equality."

Thus ends the preface. It is interesting and, in a way, encouraging; but it gives no clue to any special purpose in the book—unless, perhaps, in the last quotation can be detected a whisper of fascism, or unless the author's message is *man's constant endeavour to beautify his surroundings;* but the former theory has no further evidence to support it, and the last is definitely refuted by the buildings illustrated in the later chapters.

The book then must be taken as just another guide to prominent London buildings; the usual contents in a slightly different order. As such it is a very remarkable book. Mr. Brown has curious ideas but immense courage. He is never afraid of expressing opinions entirely opposed to those of accepted authorities—in fact, he does so on almost every page. But it is not for occasional inaccuracies that the book is remarkable so much as for the author's thoughtless incursion into a subject which he has never, apparently, even in his own mind, given its proper meaning as a part of a social scheme. He is always blinded by the *literary illusion.* A short summary of the book's contents will, perhaps, give some indication of Mr. Brown's architectural outlook.

He begins rather rashly in the first chapter by dividing European architecture into *three main styles:* Classic, Renaissance and Gothic, and taking as his London examples of these the British Museum, St. Paul's Cathedral and Westminster Abbey respectively (illustrating, incidentally, in the case of the last the Hawksmoor front). However, Mr. Brown's own words are best:—

"The most direct method of approach to the study of London architecture is through a cursory examination of three typical buildings, viz., the British Museum, St. Paul's Cathedral, and Westminster Abbey. Together they form a convenient guide to its character and development.

"In situation, they occupy three points of a triangle (see map); they indicate the intellectual and the religious (Protestant and Catholic) aspirations of the people; they are the expression of the three main styles of European architecture, viz., Classic, Renaissance, and Gothic. The Mansion House, St. Paul's Cathedral, and the Guildhall form another triangle of similar architectural influences.

"The term 'Classic' signifies 'first class,' or 'the best ever known'; and refers to the Greek era, over two thousand years ago. Simplicity is the great charm about the architecture of the learned Greeks. The design of their temples created a feeling of dignity and grandeur that has never been surpassed."

He then goes on to describe the British Museum:—

"The man chiefly responsible for the introduction of Greek ideas in architecture into England was Sir John Soane, born in the year 1753. He went to Italy and studied in Rome, where he found inspiration amongst the ruins of the temples of the Cæsars, built in the Greek style. He returned to London and was appointed architect to the Bank of England. He drew up elaborate schemes for transforming London into a modern Rome."

The rest of the description is largely occupied with an account of the circumstances in which England acquired the Elgin marbles.

The next chapter deals with the Renaissance style, exemplified by St. Paul's, which is described in detail, the parts which Mr. Brown particularly commends to our notice being the dome and two paintings: *Time, Death and Judgement*, by G. F. Watts, and the *Light of the World*, by Holman Hunt.

In the third chapter (on the Gothic style) Westminster Abbey is described, with particular emphasis laid on the "number of illustrious sons, who, due to a nation's gratitude, lie buried here; sculptors have immortalized in marble the most distinguished writers, poets, statesmen, etc., of the past five hundred years. It is the crowning and burial-place of kings."

Thus ends Part I. Part II (comprising seventy of the hundred pages contained in the book) is a chronological account of London architecture, based on the foregoing classification. It describes the usual examples and includes the usual "human interest" stories such as Vanbrugh's epitaph and, rather ingeniously, Michelangelo's broken nose; the excuse for bringing in the last being that Torregiano, who broke it, afterwards came to England and executed the tomb of Henry VII. A portrait of Michelangelo is inset in the text.

Up to the end of the eighteenth century Mr. Brown is on safe ground—the prevailing style was the only style and, but for minor ineptitudes, he makes steady if uninteresting progress. The nineteenth century is more difficult. Either history has become less picturesque or the men that make it are no longer interested in buildings, and he soon finds himself in the deep waters of architectural eclecticism, in which all writers of guide-books are sooner or later engulfed.

"The nineteenth century," he begins truly enough, "is the 'Age of Revivals' of the three chief styles of architecture, viz., Classic, Renaissance, and Gothic. One can see in our London of today what has been spoken of as 'The Battle of Styles.' Reference to the propriety of their application, or to the relations which constitute the beauty of architecture, was rarely made. The century witnessed three distinct phases of change: the Greek Portico, with pillars everywhere; the Italian Palace style, in which many West End club-houses were erected; and the 'Gothic' pointed style, used for ecclesiastical and other purposes."

He then gives a list of the most important architects and their works, followed by a description of the Albert Memorial with these rather surprising comments:

"The Great Exhibition of 1851 is said to have been the means of awakening among the people a knowledge of and love for the applied arts, and the Albert Memorial supplied them with all they required in education of that kind. The Prince Consort had been the prime mover in the development of what is spoken of as 'Practical' art, as distinct from 'Pictorial.' Decoration 'ran riot' at the 1851 Exhibition. The works exhibited were the antithesis of Greek simplicity in regard to design.

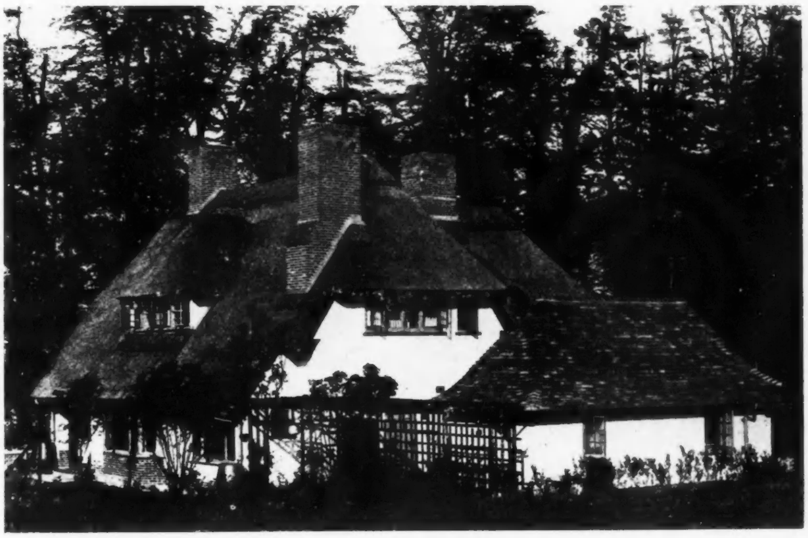
"Another impetus toward the development of art applied to industrial purposes was the establishment of schools of art throughout the country. National competitions, where students could vie with each other in their efforts to produce intricate patterns for the decoration of all kinds of wares, were held annually. Gold, silver and bronze medals were awarded to the successful competitors."

The chapter concludes thus:

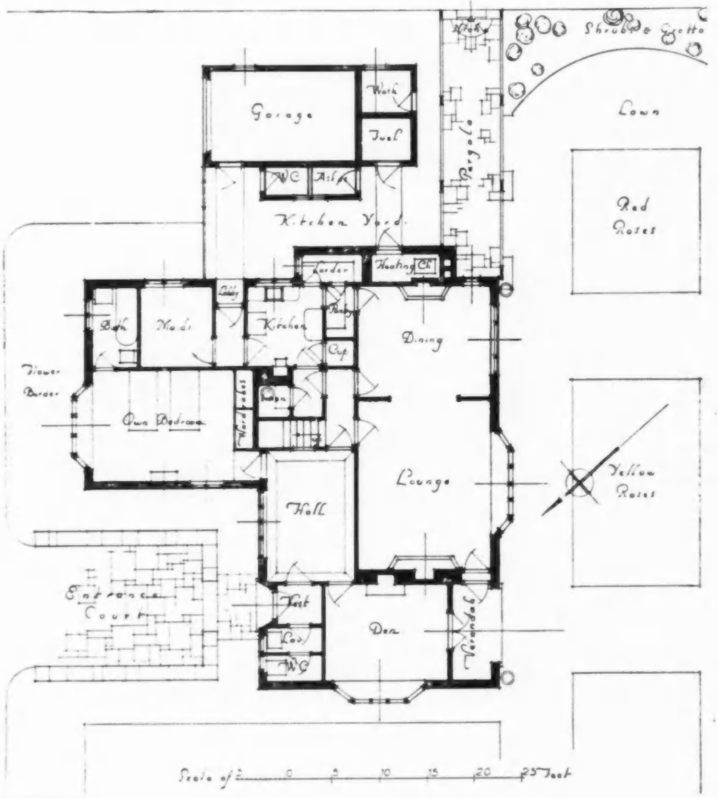
"The architecture of London during the nineteenth century proved, quite conclusively, our natural powers of adaptation, yet little attempt was made to evolve a 'National' style. Until very recently, no buildings had been erected in London but what showed the influences of the three great styles—Classic, Renaissance and Gothic."

Mr. Brown one would have thought would here have been content to rest, having had experience of such irritating confusion; and having come unharmed through the battle of the styles and

AN ARCHITECT'S OWN HOUSE



Thatch, Wollaton Park, stands in a wooded park, two miles from Nottingham. The walls are wood floated in white cement and white stone dust, and the plinth is of small local sand-stock bricks of a brindled colour. The roof is thatched with Norfolk reeds and the garage roof is tiled. The woodwork of the windows is painted pale green, and the trellice-work pillar-box red. The whole of the first floor is in the roof-space and comprises one double bedroom, three single bedrooms, bathroom and boxroom.



DESIGNED BY T. CECIL HOWITT

extracted from it so patriotic a moral; but, like the soul of his celebrated namesake, he goes bravely marching on, once more into the troubled waters of the twentieth century. After a short struggle, however, he emerges triumphantly on the reassuring foothold of Unilever House. But he is not totally unaware of what is going on around him.

> "There are indications," he says, "all over Europe that the time has arrived for a change, and the demands of great business houses dictate the character of architecture in London and elsewhere. Such buildings as *The Daily Express*, Shell Mex, and Bush House are erected to meet the requirements of newspaper proprietors, oil magnates, and insurance companies—each the result of modern developments in social life.
>
> "The use of concrete and glass as building materials, together with improved hygienic conditions, are likely to transform the appearance of our cities in the near future. It is too early to summarize, but very interesting to note how hard tradition dies. There are many distinguished architects who are not yet prepared to forsake their old love of the 'Classic' styles for the new. Unilever House, the new Bank of England, and the County Hall are proof of this, yet—'Nought shall make us rue if England to itself remain but true.'"

On this encouraging note the book comes to an end.

It would be entertaining to make an anthology of the odder passages in this peculiarly unsophisticated book. Such an anthology would include that on page 71:

> "Sir Christopher Wren had a long and active life, encountering much obstruction from commissioners, and others."

On page 50:

> "Precisely as the Hall diminished in importance, the sleeping rooms increased in size and number. Cupboards were used instead of chests and lockers. Chairs, which, from pre-Norman times had been used only by the '*Chair*man' or 'Head of the household,' now became general for other members of the family. The 'Englishman's home had become his Castle.'"

And the first paragraph of the chapter on the Stuart period:

> "At the commencement of the seventeenth century, London, with a population of half a million people, had still only one bridge across the Thames; and Inigo Jones—who became the greatest of the 'Early Renaissance' architects—was thirty years of age when James I came to the throne."

The *and* is delightful. However, it is not the purpose of this review merely to ridicule the book, or to go on quoting only for the fun of it. The quotations I have given have been chosen to illustrate a graver fault than mere quaintness or ineptitude, and a fault whose commonness in guide books of this nature justifies the length at which this example is noticed.

Mr. Brown, I have said, has the literary attitude to architecture. It is the literary attitude that is responsible for so much muddled architectural thought, and for all the mystification with which architecture is now surrounded in the public eye. It is not only a question of his chief interest in buildings being in their historical associations; it is that he has never looked beyond the outward manifestations of his styles at the forces that governed their growth. Even at the end of the book when (in the passage quoted) he does for a moment seem to recognize that contemporary stylistic architecture is not alive in the same sense as architecture was in the middle ages, the transformation he expects will, it is evident, be to him only the evolution of a new National Style—as used in the later twentieth century. The learned Greeks who built in the "classic" style might, it appears from this book, equally well have chosen the "Gothic or pointed style"—or any other; but architecture is not a question of selecting which style you will use, as the buildings of the nineteenth century (whose architects, more learned than the Greeks, knew of several styles to choose from) demonstrate.

A sentence on page 58 of this book (describing the houses of Elizabethan London) typifies Mr. Brown's attitude:

> "Picturesque effect in construction," he says, "had been obtained at the sacrifice of health and safety."

That is not true. The Elizabethans had no thought of picturesque effect; they built as healthily and safely as they knew how. As a secondary result, they built beautifully, and it is largely the romantic - association - grandeur - that - was - Rome - King - Charles - the-first-slept-here attitude, fostered in the minds of the public by such books as this, that prevents our doing so to-day.

OUR SECRETARIES

• 12 •

LOUIS A. GIRON

ROYAL INCORPORATION OF THE ARCHITECTS OF IRELAND

MR. LOUIS A. GIRON studied at the Dublin Metropolitan School of Art, where, in addition to other prizes, he was awarded the silver medal offered in the Irish Art Competition for measured drawings, and a similar medal for architectural design.

In 1920 he qualified, by examination, for membership of the Royal Institute of the Architects of Ireland, and was raised to the rank of Fellow in 1932. He has been a member of the Council of that body since 1921, and was elected president for the session 1924–25.

From 1919 to 1931 Mr. Giron was a partner in the firm of O'Callaghan and Webb, of Dublin. He is now practising in partnership with Mr. Lucius O'Callaghan, R.H.A., F.R.I.A.I.

SCHOOL NEWS

HACKNEY TECHNICAL INSTITUTE

The Architectural and Building Department of the Hackney Technical Institute, Dalston Lane, E.8, has been developed and extended greatly during the last few years, and is now fully equipped as to staff and accommodation. Both theoretical and practical training is provided in all subjects connected with architecture, building construction and the building trades.

The course of study provided for the award of National Certificates in Building has been approved by the Institute of Builders and the Board of Education, and students are also assisted in their preparation for such examinations as are held by the R.I.B.A., Royal Sanitary Institute, Chartered Surveyors' Institution, etc.

The new session of the Department, of which Mr. C. W. Box, A.R.I.B.A., A.I.STRUCT.E., is the head, commences on Monday, September 25.

HASTINGS SCHOOL OF ART

The new session of the Department of Architecture, Hastings School of Art, opens on Monday next, September 18. A studio will be available daily for students, and on Friday afternoons and evenings an Architectural Design Club (or Atelier) will be held under the direction of Mr. R. Goulburn Lovell, A.R.I.B.A. He will be assisted by a Jury or Advisory Committee of architects. Monthly programmes will be worked out, in competition with the other Ateliers, for prizes awarded by the South-Eastern Society of Architects. On Wednesday evenings throughout the session Mr. Kenneth F. Wray, A.R.I.B.A., will lecture on building construction, etc.; and, beginning on Friday, September 22, at 8 p.m., fortnightly, a course of public lectures on "Architectural Construction" will be delivered by Mr. R. Goulburn Lovell.

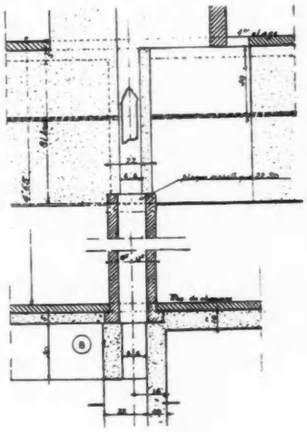
A full prospectus may be obtained from the School of Art, Brassey Institute, or at the Education Office, 18 Wellington Square, Hastings.

WORTHING SCHOOL OF ARTS AND CRAFTS

The Department of Architecture of the Worthing School of Arts and Crafts is run on similar lines to the Department at the School of Art, Hastings, described above. The session opens on September 18, and on the following day, at 8 p.m., the first of a course of public lectures on "Building and Architecture," will be delivered by Mr. R. Goulburn Lovell, A.R.I.B.A.

STOCKPORT COLLEGE

The courses in the Building Department of the Stockport College have been arranged to meet the requirements of carpenters and joiners, bricklayers, masons, plumbers, architects' assistants and others engaged in the building industry. The courses involve attendance on two half-days and one evening, or on three evenings per week. The new session of the Department, which is under the supervision of Mr. F. S. Mumford, M.I.STRUCT.E., began on Monday last, September 11.



TRADE NOTES

[*BY F. R. S. YORKE, A. R. I. B. A.*]

Panel Radiators

THE 1933 edition of the National Radiator Company's catalogue was published a week or so ago. It is particularly well produced and clearly printed, and has many well-drawn, diagramatic illustrations. A glance shows it to be worth keeping for reference.

●

The work is divided into four sections under the headings: radiators, towel rails, boilers, and valves, pipe fittings, tools, etc.

●

Under Radiators I find the Ideal Rayrad No. 24, which, whilst presenting a flat radiant heating front panel, like the other types of Rayrad heater, has, in addition, considerable heating surface at the back, which is free to transmit heat by convection. The depth of the section is 3 ins., and in order to obtain efficient transmission, the radiator should be so fixed that there is a space of 1 in. behind it, or a minimum of 4 ins. from the wall to the face of the Rayrad. A clearance of at least 3 ins. should be allowed above floor level.

●

The type is designed primarily to give maximum efficiency in window recesses though, if desired, it can be fitted into recesses in the walls. It is obtainable in three standard heights: 30 ins., 24 ins. and 18 ins., and in 16 ins. and 8 ins. section widths. A 24 ins. by 16 ins. section, giving 11.5 sq. ft. of surface, costs 30s.

School Construction

The site of the school near Paris, designed by André Lurçat, and illustrated, I believe, elsewhere in this issue, was in the form of a hollow, and often flooded, and before building operations could commence it was necessary to drain it and to raise the level by 5 ft. in order that waste water could be discharged into the sewer.

●

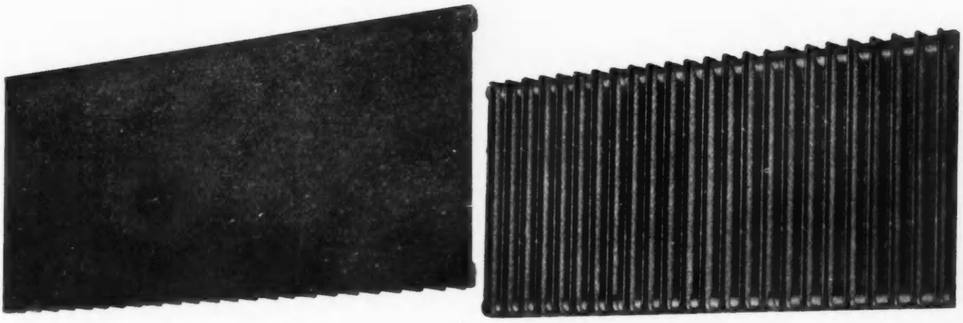
The geological formation of the ground was such that a good bottom was only obtainable at a depth of 25 ft., so the superstructure is carried by concrete piles, driven in pairs by the "Pieux Franki" system. There are altogether nearly 200 piles and their caps are connected by a raft or grid of reinforced concrete beams.

●

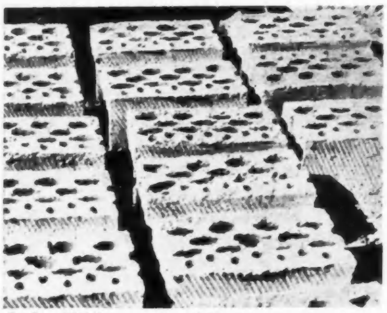
The building was constructed with a reinforced concrete frame, and the material was constantly tested in laboratories as work progressed; the strength required from it being 160 kilogrammes per sq. cm. at 90 days.

●

In order to avoid heavy columns in the covered playgrounds under the main class-



The Ideal Rayrad No. 24. Left: Front view showing the radiant panel. Right: Back view showing convected heating surface.



Left : Filling walls of Knapen pre-cast concrete blocks erected on the reinforced concrete frame of a school near Paris. Above : Knapen blocks fresh from the casting box.

room block, where isolated loads are 100 tons or more, cast iron columns have been used in place of concrete. These are hollow, and enclose outlets for rain water from the flat roof terrace and for lavatory wastes from the several floors. They are of welded steel and are perfectly watertight and were placed before the concrete was poured. (See diagram at the head of these notes.)

•

The concrete for the reinforced floors was poured around hollow slabs built up from two layers of terra cotta tiles, spaced to form cavities by other tiles laid on edge.

•

In order to avoid cutting after the floor was laid, the plumbers and electricians placed their pipes and tubes immediately the first layer of tiles was in position, before the concrete was poured. The floors of the covered playgrounds, which do not require any insulation against sound, were constructed from reinforced concrete poured over standard metal boxing, which was removed when the concrete had set.

External filling walls and partitions between the classrooms were constructed from Knapen blocks, composed of cement and sand especially selected for insulating qualities. These blocks were made on the site in two vibrated casting boxes, each of which produced blocks at the rate of two per minute.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue :

News Reel Theatre, Victoria Station (pages 321-324). General contractors, Bovis, Ltd. Sub-contractors : The Somerville-Barnard Construction Co., Ltd., steelwork ; D. G. Somerville & Co., Ltd., piling ; Young, Austen and Young, heating and ventilation ; Berkeley Electrical Engineering Co., Ltd., electrical installation ; The Rapid Floor Co., Ltd., reinforced concrete floors ; Hy-Rib Sales, Hy-Rib ; Clark and Fenn, Ltd., fibrous plaster ; Newalls Acoustic Products, Ltd., sound proofing ; C. W. Courtenay, stonework ; Crittall Manufacturing Co., Ltd., windows ; Frank Burkitt, Ltd., lantern lights ; Allensor, Ltd., joinery ; F. Knight & Co., Ltd., ironmongery and metalwork ; F. A. Norris and Co., iron staircases ; John Bolding and Sons, Ltd., sanitary fittings ; Edward Carrick, interior decorations ; The Perforated Front Projection Screen Co., Ltd., screen ; Sound and Cinema Equipment, Ltd., talkie equipment ; Major Equipment Co., Ltd., neon signs, intercommunicating telephones and canopy ; Peradin Rubber Sales, Ltd., rubber flooring ; Rust's Vitreous Mosaic and Tile Co., mosaic flooring ; W. Lusty and Sons, Ltd., seating ; Maurice, curtains and carpets.

New Nurses' Home for the Children's Hospital, Birmingham (page 333). General contractors, Maddocks and Walford. Sub-contractors : Brightside Foundry & Engineering Co., heating installation ; Thos. Glover, electric installation ; F. & C. Osler, Ltd., and John Walsh, special lighting fittings ; British Reinforced Concrete Co., Ltd., fire resisting floors ; Empire Stone Co., Ltd., staircases ; Ames and Finnis, roof tiling ; Stourbridge Glazed Brick Co., wall tiling ; George Prince, plastering ; Doulton & Co., Ltd., sanitary fittings ; Wm. Wadsworth & Sons, lift ; Lewis's, Ltd., linoleum ; Alfred Brown & Co., ironmongery ; Patent Oak Flooring Co., oak floors ; Bratt Colbran & Co., fireplaces ; G.S.T., Ltd., special decorations ; Birmingham Guild, Ltd., entrance railing and gates.

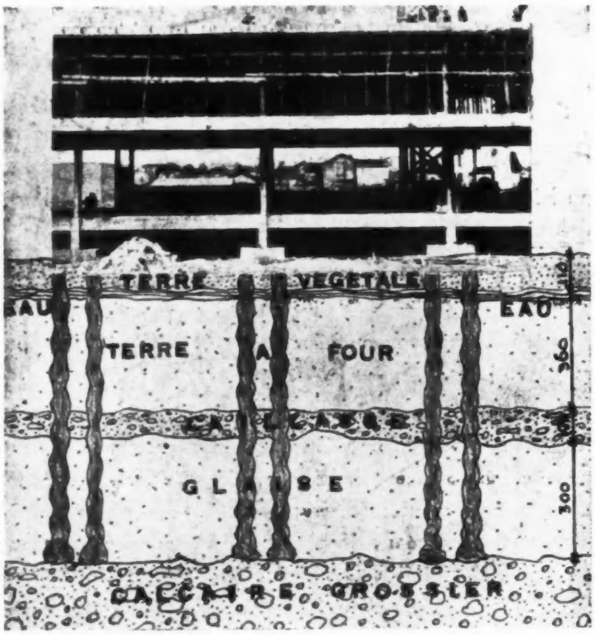
We regret that the name of Messrs. Siegwart Fireproof Floor Co., Ltd., was inadvertently omitted from the list of contractors for Hammersmith Underground Station, illustrated in our last issue. The firm was responsible for the pre-cast floors and platform roofs.

Messrs. Setchell and Sons, Ltd., inform us that the Hinderwell Council School, Scarborough, illustrated in our issue for August 17, was roofed with Old Delabole Green Peggies (varied mixed shades), and not with grey slates, as stated in our description of the building.

Trade Item

We understand that for some time Messrs F. C. Blackwell & Co., Ltd., manufacturers of the Blaco conduit joints and fittings, have been experiencing record business and have found their present factory inadequate. They have recently acquired a site adjacent to the old premises at Great Crosby, Lancs, and are building a factory with more than three times the floor space of the old premises. The factory is nearing completion and production will probably commence at the beginning of October.

One result of this move will probably be the introduction of new Blaco specialities.



A diagrammatic section through the sub-soil and pile foundation of the school at Villejuif, Paris.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

A site has been obtained at CLAPHAM COMMON for blocks of one-roomed flats. The construction will be of reinforced concrete, with pre-cast floors.

Plans passed by the FINCHLEY U.D.C.: 17 houses, Cromwell Hall estate, East End Road, for Messrs. Comben and Wakeling, Ltd.; four houses, Widecombe Way, for Mr. A. Reast; motor works extensions, High Road, Whetstone, for Mr. G. Sherwood; two houses, Kingsley Way, for Messrs. Kingstons; four flats, Elm Park Road, for Mr. W. Kidd; 20 houses, Wentworth Close, for Messrs. F. W. Bristow and Son.

The Hendon Corporation Libraries Committee has approved an amended plan of the proposed branch library at GOLDERS GREEN and is seeking sanction to borrow £9,625 for the building, and £1,800 for furniture.

Plans passed by the HENDON Corporation: Two houses, St. Margaret's Road, Edgware, for Messrs. Greenshaw, Ltd.; conversion into flats, 115, Hale Drive, for Mr. Wm. Thorpe; six houses, Gibbs Green, Edgware, for Mr. Wm. Thorpe; three houses, Downage, for Messrs. C. W. B. Simmonds, Ltd.; three houses, Downage, for Messrs. Haymills, Ltd.; alterations, 170-2 Cricklewood Broadway, for Messrs. Knight and Shepherd; two houses, Featherstone Road, for Messrs. Rainbird and Scarfe; alterations to factory, Claremont Road, for Messrs. F. G. Minter, Ltd.; 20 houses, Cissbury Ring, for Mr. O. H. Cockrill; additions, United Kingdom Optical Works, Bittacy Hill, for Mr. J. C. Woodland; four houses, off Edgware Road, for Messrs. Welch, Cachemaille-Day and Lander; additions, St. Vincent's Orphanage, The Ridgeway, for the Rev. J. O'Connell; 36 houses, off Devonshire Road, for Mill Hill Homesteads, Ltd.; two houses, Tenterden Grove, for Mr. H. V. Rowlands; new roads, Devonshire Farm Estate, for Mr. J. K. Adams; eight houses, off Edgware Road, for Messrs. Welch, Cachemaille-Day and Lander; workshop, Ravenshurst Avenue, for Mr. J. O. Dickason; 24 flats, Watford by-pass road, for Messrs. G. A. Oram and Son; 20 flats, Upcroft Avenue, for Mr. B. A. T. Hammond; 16 flats, Finchley Road, for Mr. H. C. Brown; 19 houses, Abercorn Road, for Mill Hill Homesteads, Ltd.; 80 flats, Brent Street, for Messrs. Tatchell and Wilson; additions, Hendon Cottage Hospital, for Mr. W. Marchment; four shops, Station Road, Edgware, for Mr. E. F. Hand; club and hall, Lullington Garth, for Mr. O. H. Cockrill; two shops, Edgwarebury Lane, for Mr. A. J. Butcher; 60 houses, Edgware Road, for Mr. Wm. Thorpe.

Plans passed by the MITCHAM U.D.C.: Store and offices, London Road, for Mitcham Builders Supply Co.; cold store and wagon room, Mortimer Road, for Margarine Produce Co., Ltd. Plans submitted: 99 houses, off Morden Road, for Messrs. Dawsley, Ltd., 55 houses, De'Arn Gardens, for Mr. G. V. Dearn.

The WALTHAMSTOW Corporation is seeking sanction to borrow £64,750 for the erection of electricity showrooms and offices on the Church Hill site.

SOUTHERN COUNTIES

Plans passed by the EASTBOURNE Corporation: Conversion into flats, 24 Furness Road, for Mr. C. M. Wood; alterations and additions, 67 Terminus Road, for Timothy Whites, Ltd.; alterations, Terminus Garage, Terminus Place, for Mr. A. Ford; alterations, The Grange, St. Anne's Road, for Messrs. Murray, Delves, Murray and Atkins; two houses, Rotunda Road, and conversion into three flats, Wykeham House, Chesterfield Road, for Mr. S. G. Sales; alterations, 35 Seaside, for Mr. S. G. Sales; two shops, Douglas House, Seaside, for Messrs. P. D. Stonham and Sons; conversion into two shops, 12a Grove Road, for Mr. B. Stevens; three flats, 10 Spencer Road, for Mr. D. Wood; two houses, Longland Road, for Mr. W. James; conversion into shop, 37 Victoria Place, for Messrs. Hillier, Parker, May and Rowden.

Plans passed by the OXFORD Corporation: Squash racquets court, rear Holywell Music rooms, for Wadham College; office and stores, Collins Street, for H. Tuckwell and Sons, Ltd.; undergraduates' rooms, St. Edmund's Hall, Queen's Lane, for Principal; additions, Salesian College, Junction Road, Cowley, for College trustees; three houses, Five Mile Drive, and house, Latimer Road, for Messrs. Hinkins and Frewin, Ltd.; two houses, George Street, Cowley, for Mr. J. E. Cammell; four houses, Bowness Avenue, for Messrs. Cripps and Stewart; additions, 13 Oriel Street, for Oriel College.

The SHOREHAM-BY-SEA U.D.C. has approved the amended lay-out for a new school and 68 houses in the vicinity of Middle Road, Kingston, submitted by the West Sussex County Council, provided the Council allocates four acres of land as a permanent open space.

SOUTH-WESTERN COUNTIES

The Somerset Education Committee has obtained sanction to borrow £51,450 for the erection of a secondary school at WESTON-SUPER-MARE.

MIDLAND COUNTIES

Plans passed by the CHELTENHAM Corporation: Two houses, Queen's Road, for Mr. G. A. N. Hall; three houses, Naunton Terrace, for Mr. C. H. Reason; four houses, Albert Road, for Messrs. A. C. Billings and Sons, Ltd.; additions, Hotel Majestic, Park Place, for Miss E. K. Bayliss; showroom and garage, Winchcomb Street, for Victory Motor Co.; new ward block, General Hospital, Sandford Road, for Governors; four houses, Arle Road, for Mr. F. J. Yeates; shop and house, Gloucester Road, for Mr. F. F. Holtman; four houses, Thorncliffe estate, for Mr. S. C. Morris; two houses, Arle Road, for Mr. C. Hawker; development, Green Hyde estate, Winchcomb, for Messrs. Wheeler and Mansell; club house, Stoke Road, for Bishops Cleeve Toc H; estate development, Cirencester Road, Charlton Kings, for Messrs. E. H. Bradley and Sons; estate development, Coldpool Lane, for Mr. R. Edwards; development, Ewens Farm estate, Charlton Kings, and land in Whaddon Road, for Naunton Estates, Ltd.; flats, Montpelier Parade, for Messrs. L. W. Barnard and Partners.

The NORTHAMPTON Corporation has arranged a programme for the provision of 450 new houses for clearances and improvements.

Plans passed by the NUNEATON Corporation: Alterations to premises, 46 Church Street, for Mr. R. Morton; four houses, Lutterworth Road, for Messrs. Oughton and Lowe; alterations to premises, 8 The Square, Attleborough, for Mr. J. H. Cooper; four houses, Weddington Lane, for Mr. R. H. Simmonds; warehouse, Wheat Street, for Messrs. McDonagh Bros.; four houses, Heath End Road, for Mr. W. Darlaston; four houses, Bucks Hill, for Mr. H. Groves; two houses, Higham Lane, for Mr. Jos. Hextall; two houses, Richmond Road, for Mr. E. G. Pallett; 24 houses, new street off Tuttle Hill, for Messrs. Geo. Cooper and Sons, Ltd.; alterations to club, Bridge Street, for The Cilvers Coton Conservative Club; four houses, Long Shoot, for Mr. F. Pallett.

EASTERN COUNTIES

Plans passed by the CAMBRIDGE Corporation: Shop, Station Road, Histon, for Miss G. Chapman; lay-out for 47 houses, Cherryhinton Road, for Mr. H. D. Ridgeon; additions, 22-41 Lovell Road, for Mr. Ralph Thompson; additions to shop, 84 High Street, for Mr. G. B. Mortlock; showroom and stores, 150 and 152 Hills Road, for Mr. A. W. Morlin; committee and recreation rooms, Victoria Road, for Victoria Friendly Societies' Institution; additions, St. Andrew's Street, for New Theatre, Cambridge, Ltd.; extension to school of botany, Tennis Court Road, for the Chancellor, Masters and Fellows of the University of Cambridge; two houses, Mowbray Road, for Mr. H. G. Pettit; additions, 32 Fulbrooke Road, for Dr. E. H. Holmes; shop, Tenison Road, for Stetchworth Dairies, Ltd.; four houses, Marmora Road, for Messrs. Johnson and Bailey; alterations and additions, Mallory Court, Magdalene Street, for the Master and Fellows of Magdalene College; alterations, Hills Road, for the Cambridge and District Co-operative Society, Ltd.; alterations and additions, Round Church Street, for Cambridge Union Society; two houses, Gilbert Road, for Messrs. Shoote and Haynes; additions, Trumpington Street, for the governors of Addenbrooke's Hospital.

NORTHERN COUNTIES

The BOLTON Corporation Housing Committee has approved lay-out plans providing for the erection of the following houses, etc., on the Top-o'th'-Brow estate: 100 two-bedroomed houses; 188 three-bedroomed houses; 12 four-bedroomed houses; 28 bungalows; 32 flats and five shops.

Plans passed by the CHORLEY Corporation: Two houses, Egerton Grove, for Messrs. J. W. Lee, Ltd.; 25 houses, Bolton Road, etc., for Mr. G. F. Norris; land development, Bolton Road, for Mr. Thomas H. Kevill; additions, engine room, Hippodrome, for Messrs. Grime, Sharples & Grime.

Plans passed by the DEWSBURY Corporation: Six houses, Mendip Road, for Messrs. Sam Scott and Sons; 15 houses, North Road, for Messrs. Mitchell Bros.; six houses, Scarr End Lane, for Mr. W. K. Salisbury; two houses, Bendigo Road, for Mr. F. Ekert; eight houses, Chiltern Road, for Mr. J. W. Thornton; six houses, Headland Road, for Messrs. Heywood and Peirson; two houses, Grasmere Road, for Mr. P. Ward.

Plans passed by the IRLAM U.D.C.: Two houses, off Fir Street, for Mr. G. H. Dobson; alterations and additions, 165, Liverpool Road, for Mr. W. Eve; additions to school, Chapel Road, for the Trustees of Irlam Endowed School; two houses, Liverpool Road, for Mr. J. Findlater; 13 houses, Caroline Street, for Messrs. Matley and Walton.

The LINCOLNSHIRE C.C. recommends the provision of further general hospital accommodation at the Louth institution, at a cost of £60,000.

The MANCHESTER Corporation is to erect 708 houses and 36 flats at Brownley Green, at a cost of £257,364.

The MANCHESTER Corporation is seeking sanction to borrow £50,000 for the construction of roads and the erection of shops on the Wyetenshawe estate.

Plans passed by the ROCHDALE Corporation: Four houses, Dewhirst Road, for Mr. T. Bussy; café additions, 10 Drake Street, for Mr. Samuel Irlam; 10 houses, Lonsdale Avenue, for Messrs. W. H. Ashworth and Son, Ltd. Plans submitted: 10 houses, Queensway, for Mr. J. W. Clegg.

Plans passed by the SOUTHPORT Corporation: Shop premises, Liverpool Road, for Mr. G. E. Johnson; four houses, Dunbar Road, for Mr. J. E. Hopwood; two shops, Marshside Road, for Mr. John Watkinson; five houses, Cambridge Road, for Messrs. Highton and Taylor; bakehouse, Botanic Road, for Messrs. Wignall and Ainsworth.

The WIGAN Corporation is to erect 104 houses on the Worsley Hall estate, at an estimated cost of £33,786.

WALES

Plans passed by the COLWYN BAY U.D.C.: Two houses, Bryn Marl Road, Mochdre, for Mr. V. S. Whitworth; alterations to office, Hesketh Road, for the Colwyn Bay and West Denbighshire Hospital managers; five houses, off Marine Drive, for Messrs. Wooller and Sons; 39 houses, Penrhyn Avenue, for Messrs. Wooller and Sons; two houses, Tan-yr-Allt Avenue, Mochdre, for Mr. W. Salisbury; two houses, Llwyd Grove, for Mr. Robert Owen.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen ; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	BANBURY	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¾
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5	1 0¾
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A	Cumberland	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	HALIFAX	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	JARROW	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	LANCASTER	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¾
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¾
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W. Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	PAISLEY	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	TAMWORTH	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1 1¼
A	Tyne District	N. E. Coast	1 5½	1 1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	YARMOUTH	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

*** In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.**

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	„		1	7
Joiner	„		1	7
Machinist	„		1	8
Mason (Banker)	„		1	7
„ (Fixer)	„		1	8
Plumber	„		1	7
Painter	„		1	6
Paperhanger	„		1	6
Glazier	„		1	7
Slater	„		1	7
Scaffolder	„		1	3
Timberman	„		1	3
Navvy	„		1	2½
General Labourer	„		1	2½
Lorryman	„		1	5
Crane Driver	„		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	„	1	16	6
Hydrated Lime	„	3	0	9
Portland Cement	„	2	6	0
Rapid Hardening Cement	„	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	„		7	6
Building Sand	„		7	9
Washed Sand	„		8	9
2" Broken Brick	„		8	3
¾" „ „	„		11	0
Pan Breeze	„		6	6
Coke Breeze	„		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	„	3	6	5	3
Rest bends	„	4	3	6	3
Single junctions	„	3	6	5	3
Double „	„	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	„	4	6	6	6
Channel tapers	„	2	9	4	0
Yard gullies	„	6	9	8	9
Interceptors	„	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	„	9	0	15	0
Single junctions	„	8	9	18	0
Double junctions	„	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	„		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	„	3	0	0
Phorpres bricks	„	2	18	0
Stocks, 1st quality	„	4	11	0
„ 2nd „	„	4	2	6
Blue Bricks, Pressed	„	9	2	6
„ Wirecuts	„	8	2	6
„ Brindles	„	7	6	6
„ Bullnose	„	9	14	0
Red Sand-faced Facings	„	6	18	6
Red Rubbers for Arches	„	12	0	0
Multicoloured Facings	„	8	8	0
Luton Facings	„	8	0	0
Phorpres White Facings	„	3	17	3
Phorpres Rustic Facings	„	3	12	3
Midhurst White Facings	„	5	[illegible]	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	„	21	10	0
Headers	„	21	0	0
Bullnose	„	28	0	0
Double Stretchers	„	30	0	0
Double Headers	„	27	0	0
Glazed Second Quality, *Less*	„	1	0	0
„ Buffs and Creams, *Add*	„	2	0	0
„ Other Colours	„	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" „ „ „	„		1	10
3" „ „ „	„		2	1
4" „ „ „	„		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
„ „ Basebed	„	4	9
Bath stone	„	2	11
York stone	„	6	6
„ „ Sawn templates	„	7	6
„ „ Paving, 2"	F.S.	1	8
„ „ „ 3"	„	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	„	24	10	0
20" × 10" Countesses	„	19	5	0
18" × 10" Viscountesses	„	15	10	0
18" × 9" Ladies	„	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
„ green	„ „	24	7	4
Best machine roofing tiles	„	4	10	0
Best hand-made do.	„	5	0	0
Hips and valleys	each			9½
„ hand-made	„			10
Nails, compo	lb.		1	4
„ copper	„		1	6

CARPENTER AND JOINER

				s.	d.
Good carcassing timber		F.C.		2	2
Birch		as 1" F.S.			9
Deal, Joiner's		„ „			5
„ „ 2nds		„ „			4
Mahogany, Honduras		„ „		1	3
„ African		„ „		1	1
„ Cuban		„ „		2	6
Oak, plain American		„ „		1	0
„ Figured „		„ „		1	3
„ Plain Japanese		„ „		1	2
„ Figured „		„ „		1	5
„ Austrian wainscot		„ „		1	6
„ English		„ „		1	11
Pine, Yellow		„ „		1	0
„ Oregon		„ „			4
„ British Columbian		„ „			4
Teak, Moulmein		„ „		1	3
„ Burma		„ „		1	2
Walnut, American		„ „		2	3
„ French		„ „		2	3
Whitewood, American		„ „		1	1
Deal floorings,	¾"	Sq.		19	0
„	⅞"	„	1	1	6
„	1"	„	1	3	6
„	1¼"	„	1	7	6
„	1½"	„	1	12	0
Deal matchings	½"	„		14	0
„	¾"	„		15	6
„	1"	„	1	4	0
Rough boarding	¾"	„		16	0
„	1"	„		18	0
„	1½"	„	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1¼"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
„ 3"-11½" long	„	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	„	11	1/3	2/2	2/10	5/3
„ „ 3"-11½" long	„	8	10	1/5	1/11	3/6
Bends	„	8	11	1/7½	2/7½	5/2
Springs not socketed	„	5	7	1/1½	1/11½	3/11
Socket unions	„	2/-	3/-	5/6	6/9	10/-
Elbows, square	„	10	1/1	1/6	2/2	4/3
Tees	„	1/-	1/3	1/10	2/6	5/1
Crosses	„	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	„	3	4	6	8	1/3
Diminished sockets	„	4	6	9	1/-	2/-
Flanges	„	9	1/-	1/4	1/9	2/9
Caps	„	3½	5	8	1/-	2/-
Backnuts	„	2	3	5	6	1/1
Iron main cocks	„	1/6	2/3	4/2	5/4	11/6
„ „ with brass plugs	„	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61¼	„ water	47½
Steam	57½	„ steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	„ water	42½
Steam	47½	„ steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	„	8	6
„ „ ⅜"	„	8	3
„ „ ½"	„	8	0
„ „ ⅝"	„	7	6
„ „ ¾"	„	7	6
„ „ 1"	„	7	6
„ „ 1¼"	„	7	6
„ „ 1½"	„	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	„	5	0	8	6
Boots	„	3	3	4	5
Bends	„	2	9	4	0
„ with access door	„	—		6	9
Heads	„	4	0	5	0
Swan-necks up to 9" offsets	„	4	0	6	3
Plinth bends, 4½" to 6"	„	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	„	1	7	1	11
Obtuse angles	„	2	0	2	6
Outlets	„	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	1	0
„ drawn pipes	„		18	0
„ soil pipe	„	1	5	0
„ scrap	„		13	6
Solder, plumbers'	lb.			10
„ fine do.	„		1	0
Copper, sheet	„			10½
„ tubes	„			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	„	1	1	1	3	2	8
Galvanized	„	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	„	3	9	5	3	10	3
Shoes	„	2	10	4	4	0	6
Heads	„	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	„	2	10	0
„ fine	„	4	15	0
Hydrated lime	„	3	0	9
Sirapite	„	3	6	0
Keene's cement	„	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
„ rent	„		3	9
Lath nails	lb.			3½

GLAZIER

		s. d.		s. d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.			2½
„ „ 26 oz. „ „ „	„			3½
Arctic glass, white	„			7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	„			6½
¼" Hartley's rough rolled	„			7
¼" „ wired cast	„			10
¼" Georgian wired cast	„			11
¼" Polished plate, n/e 1 ft.	„	†7½	to	‡1 0
„ „ 2	„	†10	„	‡1 3½
„ „ 3	„	†1 4½	„	‡1 10
„ „ 4	„	†1 11	„	‡2 4
„ „ 6	„	†2 3	„	‡2 7½
„ „ 8	„	†2 5	„	‡3 0½
„ „ 12	„	†2 10	„	‡3 3½
„ „ 20	„	†3 3½	„	‡3 9
„ „ 45	„	†3 6½	„	‡4 0½
„ „ 65	„	†3 11½	„	‡4 4
„ „ 90	„	†4 4	„	‡4 9
„ „ 100	„	†4 6	„	‡4 11
Vita glass, sheet, n/e 1 ft.	„			1 0
„ „ „ „ 2	„			1 3
„ „ „ over 2	„			1 9
„ „ plate, n/e 1 ft.	„			1 6
„ „ „ 2	„			3 0
„ „ „ 5	„			4 0
„ „ „ 7	„			5 0
„ „ „ 15	„			6 0
„ „ „ over 15	„			7 6
Putty, linseed oil	lb.			3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	„		2	4½
Turpentine	„		4	1½
Patent knotting	„		14	0
Distemper, washable	cwt.	3	0	0
„ ordinary	„	2	5	0
Whitening	„		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	„		14	0
Outside varnish	„		16	0
White enamel	„	1	15	0
Ready-mixed paint	„		13	6
Brunswick black	„		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

			£	s.	d.
Digging over surface n/e 12" deep and cart away		Y.S.		2	9
,, to reduce levels n/e 5' 0" deep and cart away		Y.C.		8	6
,, to form basement n/e 5' 0" deep and cart away		,,		9	0
,, ,, 10' 0" deep and cart away		,,		9	6
,, ,, 15' 0" deep and cart away		,,		10	0
If in stiff clay	add	,,		2	6
If in underpinning	,,	,,		4	0
Digging, return, fill and ram	,,	,,		4	0
Planking and strutting to sides of excavation		F.S.		1	0
,, ,, to pier holes		,,			5
,, ,, to trenches		,,			5
,, ,, extra, only if left in		,,			3
Hardcore, filled in and rammed		Y.C.		10	0
Portland cement concrete in foundations (6-1)		,,	1	6	0
,, ,, ,, (4-2-1)		,,	1	12	6
,, ,, underpinning		,,	1	16	0
Finishing surface of concrete, spade face		Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra only for bends	Each	2	8	3	9
,, junctions		3	9	4	6
Gullies and grating	,,	16	6	18	0
Cast iron drains and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
,, ,, in cement	,,	29	15	0
,, Stocks in cement	,,	35	15	0
,, Blues in cement	,,	52	0	0
Extra only for circular on plan	,,	2	0	0
,, backing to masonry	,,	1	10	0
,, raising on old walls	,,	2	0	0
,, underpinning	,,	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	,,			5½
,, ,, ,, red brick facings and pointing	,,			11
,, ,, ,, blue brick facings and pointing	,,		1	4
,, ,, ,, glazed brick facings and pointing	,,		3	6
Tuck pointing	,,			7
Weather pointing in cement	,,			3½
Slate dampcourse	,,			10
Vertical dampcourse	,,		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	,,	6	9
¾" paving or flat	,,	4	0
1" paving or flat	,,	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	,,		2
Rounded angle	,,		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	,,		13	6
Artificial stone and do.	,,		13	0
York stone templates, fixed complete	,,		10	6
,, thresholds	,,		13	6
,, sills	,,	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	,,	3	7	0
Do., 24" × 12"	,,	3	17	0
Westmorland slating, laid with diminished courses	,,	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	,,	3	0	0
Do., all as last, but of machine-made tiles	,,	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	,,	4	6	6
,, ,, ,, ,, ,, ,, (green)	,,	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
,, to stanchions	,,			8
,, to staircases	,,		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	,,		4	6
,, ,, roofs	,,		6	6
,, ,, trusses	,,		7	6
,, ,, partitions	,,		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" ,, ,, ,, ,,	,,	1	17	6
1¼" ,, ,, ,, ,,	,,	2	3	0
¾" × 2" fir battening for Countess slating	,,		9	6
Do. for 4" gauge tiling	,,		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
,, ,, ,, 2 ,,	,,		2	9
,, ,, ,, 3 ,,	,,		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1½" ,, ,, ,, ,, ,,	,,		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	,,	2	12	6
1½" do.	,,	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S		1	6
1¼" do.	,,		1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" ,, ,,	,,	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	3	9
2" ,, ,, ,,	,,	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" ,, ,, ,,	,,	2	8
1½" ,, but moulded both sides	,,	2	4
2" ,, ,, ,,	,,	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" ,, ,,	,,	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	2	6
1½" deal moulded wall strings	,,	2	1
1½" ,, outer strings	,,	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" ,, ,,	,,	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	,,	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	,,		19	6
Do. stanchions with riveted caps and bases and do.	,,		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	,,		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	6
Do. in flashings		1	18	0
Do. in covering to turrets, etc.	,,	2	4	0
Do. in soakers	,,	1	10	0
Labour to welted edge	F.R.			3½
Open copper nailing	,,			3½
Close ,, ,,	,,			4½

		½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1¼" s.	1¼" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks	F.R.	1	0	1	2	1	5	2	1	3	0	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	3
Do. to stop ends	,,		6½		8		9		11	1	3	—	
Boiler screws and unions	,,	3	3	3	9	5	0	8	0	—		—	
Lead traps	,,	—		—		—		6	3	8	9	—	
Screw down bib valves	,,	6	9	9	6	11	0	—		—		—	
Do. stop cocks	,,	9	0	11	0	14	6	20	6	47	0	—	

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	,,	1	6
Do. outlets	,,	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	,,	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	,,		3	6
Lathing with sawn laths to ceilings	,,		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	,,		1	9
Do. vertical	,,		2	3
Rough render on walls	,,		1	4
Render, float and set in lime and hair	,,		2	0
Render and set in Sirapite	,,		2	2
Render, backing in cement and sand, and set in Keene's cement	,,		3	1
Extra, only if on lathing	,,			4
Keene's cement, angle and arris	F.R			6
Arris	,,			2
Rounded angle, small	,,			3
Plain cornices in plaster, including dubbing out, per 1" girth	,,			1½
1" granolithic pavings	Y.S.		3	6
1½" ,,	,,		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	,,		17	6
9" × 3" ,, ,, ,, ,,	,,	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	,,		8½
Arctic glass and glazing with putty	,,	1	1
Cathedral glass and do.	,,	1	2
Glazing only, British polished plate	,,		7
Extra, only if in beads	,,		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	,,		9
Do. with washable distemper	,,	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3	3
Do. on woodwork	,,	3	6
Do. on steelwork	,,	3	0
Do. and brush grain and twice varnish	,,	5	6
Stain and twice varnish woodwork	,,	1	11
Stain and wax-polish woodwork	,,	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper from	,,	2	9

B.S. Sections from the British Standards Institution's specification Nº 4-1932. (Obtainable from the B.S.I., 28 Victoria Street) London S.W.1. post free 2/2.)

BRITISH STANDARD I BEAMS

Height	Width	Weight
● 24	7½	100
24	7½	95
● 24	7½	90
22	7	75
20	7½	89
20	6½	65
18	8	80
18	7	75
18	6	55
16	8	75
16	6	62
16	6	50
15	6	45
15	5	42
14	8	70
14	6	57
14	6	46
● 14	5½	40
13	5	35
12	8	65
12	6	54
12	6	44
12	5	32
10	8	55
● 10	8	70
10	6	40
10	5	30
10	4½	25
9	7	50
9	4	21
8	6	35
8	5	28
8	4	18
7	4	16
● 7	3½	15
6	5	25
6	4½	20
6	3	12
5	4½	20
5	3	11
● 5	2½	9
4¾	1¾	6·5
● 4½	2	7
4	3	10
4	1¾	5
3	3	8·5
3	1½	4

B.S. beams as revised 1932

BRITISH STANDARD EQUAL ANGLES

Height	Width	Thicknesses					
9	9	...	...	...	9/16	11/16	13/16
8	8	1/2	5/8	3/4	7/8	15/16	1.
6	6	3/8	1/2	5/8	3/4	7/8	1.
5	5	...	5/16	3/8	1/2	5/8	3/4
4	4	...	...	5/16	3/8	1/2	5/8
3½	3½	...	...	5/16	3/8	1/2	5/8
3	3	...	1/4	5/16	3/8	1/2	5/8
2¾	2¾	...	...	...	1/4	3/8	1/2
2½	2½	...	...	1/4	5/16	3/8	1/2
2¼	2¼	...	...	..	1/4	5/16	3/8
2	2	...	...	3/16	1/4	5/16	3/8
1¾	1¾	...	...	3/16	1/4	5/16	3/8
1½	1½	...	...	...	...	3/16	1/4
1¼	1¼	...	...	...	...	3/16	1/4
● 1	1						
● 7/8	7/8						
● 3/4	3/4						
● 5/8	5/8						
● 1/2	1/2						

BRITISH STANDARD UNEQUAL ANGLES

Height	Width	Thicknesses				
10	4	...	...	7/16	9/16	11/16
9	4	...	...	7/16	5/8	13/16
8	6	...	1/2	5/8	3/4	1
8	4	...	..	7/16	5/8	3/4
● 7	4	...	3/8	1/2	5/8	3/4
7	3½	...	3/8	1/2	5/8	3/4
6	4	...	3/8	1/2	5/8	3/4
6	3½	...	3/8	1/2	5/8	3/4
6	3	...	5/16	3/8	1/2	5/8
5	4	...	5/16	3/8	1/2	5/8
5	3½	...	5/16	3/8	1/2	5/8
5	3	...	5/16	3/8	1/2	5/8
4	3½	...		3/8	1/2	5/8
4	3	...	5/16	3/8	1/2	5/8
3½	3	1/4	5/16	3/8	1/2	5/8
3½	2½	...	1/4	5/16	3/8	1/2
3	2½	...	1/4	5/16	3/8	1/2
3	2	...	1/4	5/16	3/8	1/2
2½	2	...	...	1/4	5/16	3/8
2½	1½	...	...	3/16	5/16	3/8
2	1½	...	3/16	1/4	5/16	3/8
● 2	1					
● 1¼	3/4					
● 1	3/8					

STANDARD WIRE GAUGES

WIRE Nº	S.W.G. diam in ins.	B.W.G. diam in ins.
7/0	·500	
6/0	·464	
5/0	·432	·500
4/0	·400	·454
3/0	·372	·425
2/0	·348	·380
0	.324	·340
1	·300	·300
2	·276	·284
3	·252	·259
4	·232	·238
5	·212	·220
6	·192	·203
7	·176	·180
8	·160	·165
9	·144	·148
10	·128	·134
11	·116	·120
12	·104	·109
13	·092	·095
14	·080	·083
15	·072	·072
16	·064	·065
17	·056	·058
18	·048	·049
19	·040	·042
20	·036	·035
21	·032	·032
22	·028	·028
23	·024	·025
24	·022	·022
25	·020	·020
26	·018	·018
27	·0164	·016
28	·0148	·014
29	·0136	·013
30	·0124	·012
31	·0116	·010
32	·0108	·009
33	·0100	·008
34	·0092	·007
35	·0084	·005

BRITISH STANDARD TEES

Height	Width	thickness		
6	6	...	1/2	5/8
6	4	...	1/2	5/8
● 6	3	...		
5	4	...	1/2	5/8
5	3		3/8	1/2
● 4	4	...	3/8	1/2
4	3	...	3/8	1/2
● 3½	3½		3/8	1/2
3	3	5/16	3/8	7/16
2½	2½	1/4	5/16	3/8
2	2	1/4	5/16	3/8
1½	1½	...	3/16	1/4
● 1¼	1¼			
● 1	1			
● 3/4	3/4			
● 1/2	1/2			

BRITISH STANDARD CHANNELS

Height	Width	weight	Height	Width	weight
17	4	51·28	8	3½	23·20
17	4	44·34	8	3½	20·21
15	4	42·49	8	3	18·68
15	4	36·37	8	3	15·96
13	4	38·92	7	3½	20·18
13	4	33·18	7	3½	18·28
12	4	36·63	7	3	17·07
12	4	31·33	7	3	14·22
12	3½	30·45	6	3½	18·52
12	3½	26·37	6	3½	16·48
11	3½	30·52	6	3	17·53
11	3½	26·78	6	3	16·51
10	3½	28·54	6	3	13·64
10	3½	24·46	6	3	12·41
10	3	21·33	5	2½	11·24
10	3	19·28	5	2½	10·22
9	3½	25·63	4	2	7·91
9	3½	23·49	4	2	7·09
9	3½	22·27	3	1½	5·11
9	3	19·91	3	1½	4·60
9	3	17·46			

B.S. channels as revised 1932

DIMENSIONS OF PLATES

Width inches	Thickness max.	Thickness min.	Width inches	Thickness max.	Thickness min.	Width inches	Thickness max.	Thickness min.
20	3/8	1	7	1/4	1	3	1/4	1⅛
18	3/8	3/4	6½	1/4	1	2¾	1/4	3/4
16	3/8	3/4	6	1/4	1	2½	1/4	3/4
14	3/8	3/4	5½	1/4	1	2¼	1/4	3/4
13	3/8	3/4	5	1/4	1	2	1/4	3/4
12	3/8	3/4	4½	1/4	3/4	1¾	1/4	3/4
10	3/8	3/4	4	1/4	3/4	1½	1/4	3/4
9	3/8	3/4	3¾	1/4	3/4	1¼	1/4	1/2.
8	3/8	3/4	3½	1/4	3/4			
7½	1/4	3/4	3¼	1/4	3/4			

DIMENSIONS OF ROUND & SQUARE STEEL BARS

Diameter or side in inches	Diameter or side in inches	Diameter or side in inches.
1/4	1¼	3
5/16	1⅜	3¼
3/8	1½	3½
7/16	1⅝	3¾
1/2	1¾	4
9/16	1⅞	4¼
5/8	2	4½
11/16	2⅛	4¾
3/4	2¼	5
13/16	2⅜	5¼
7/8	2½	5½
15/16	2⅝	5¾
1	2¾	6.
1⅛	2⅞	

● Sections marked thus are not British Standard Sections.
Weights given are calculated weights per foot run

INFORMATION SHEET : STEELWORK : STANDARD SIZES OF SECTIONS ETC

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

Supplement to THE ARCHITECTS' JOURNAL for September 14, 1933

INFORMATION SHEETS

• 37 •

STEELWORK : I

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THIS week we publish the first and second of three Information Sheets devoted to steelwork.

The following is a full list of the subjects previously issued :—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units : 1.
13. Apr. 12—Lavatory Units : 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs : 1.
23. June 29—Concrete Stairs : 2.
24. July 6—Pressed Steel Stairs : 1.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs : 2.
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes : 1.
30. Aug. 17—Lay-out of Wardrobes : 2.
31. Aug. 24—Common Sizes Miscellaneous.
32. Aug. 24—Electric Lighting : I.
33. Aug. 31—Electric Lighting : II.
34. Aug. 31—Electric Lighting : III.
35. Sept. 7—Electric Lighting : IV.
36. Sept. 7—Vacuum Cleaning Systems.

GENERAL NOTES

1. Fix top of the constructional slab a definite distance below the finished floor level. (generally 3" will be sufficient to allow for covering conduits and pipes.)
2. For roofs fix the top of the structural slab as datum. All levels of beams, roof levels and slopes to be figured from this datum.

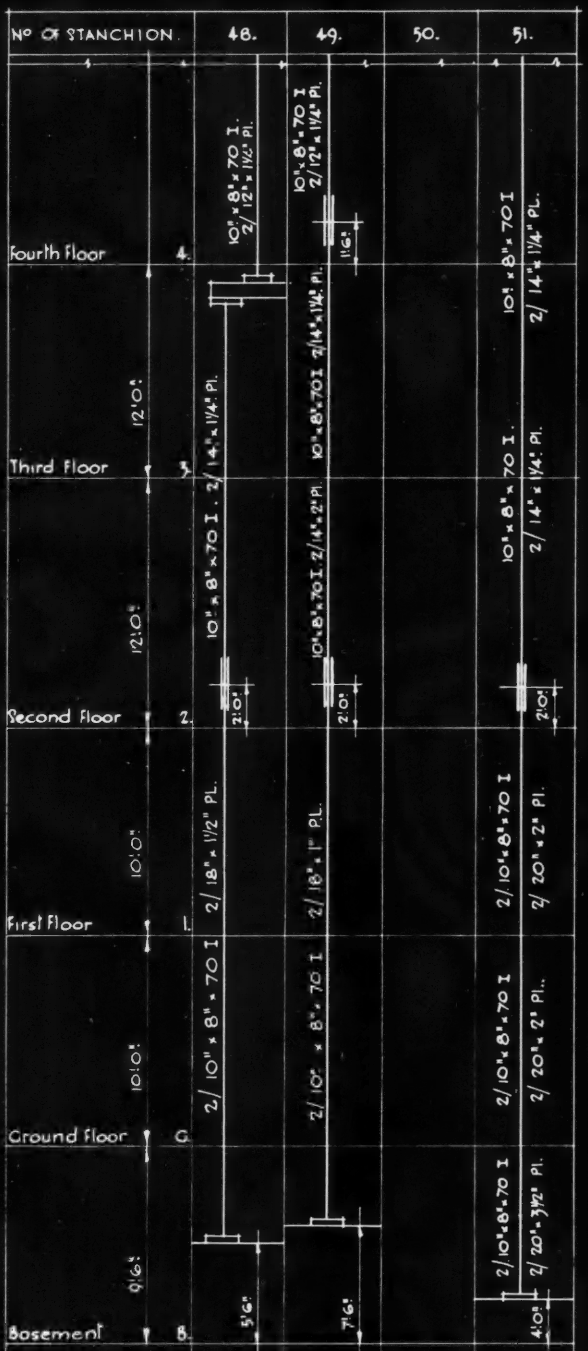
CHECKING LIST.

FOR STANCHIONS NOTE:

1. That fireproofing will not always cover bracket seatings to beams, stanchion caps and bases, splices etc.
2. note cases where beams are wider than the stanchions supporting their ends.
3. where splices are indicated thus: ╫ the lower (and larger) section will run at least up to the joint line
4. at splices allow from 1" to 2½" over the size of the larger section to cover the splice plates and rivets.
5. pipe holes should be fixed early so that holes may be cut the shops.

FOR BEAMS NOTE:

1. where windbraces occur allow for these splaying out at the column.
2. where connections are on the skew
   or are much eccentric
   or are cantilevered
   or have heavy reactions
   allow for bracket connections.
3. where beam is hung allow for hanger passing upper beam.
4. where beam is cranked as for mansards, rakers or stringers etc. allow for splice covers on flanges and note countersunk rivets may be required.
5. where wall plates (W.P.) occur note whether ℄ of beam & ℄ of plate coincide or not.


Nº OF STANCHION.
48.
49.
50.
51.
Fourth Floor 4.
Third Floor 3.
Second Floor 2.
First Floor 1.
Ground Floor G.
Basement B.
12'0"
12'0"
10'0"
10'0"
9'6"
10" × 8" × 70 I. 2/ 12" × 1½" Pl.
10" × 8" × 70 I. 2/ 14" × 1¼" Pl.
2/ 10" × 8" × 70 I 2/ 18" × 1½" PL.
2'0"
5'6"
10" × 8" × 70 I 2/ 12" × 1¼" Pl.
1'6"
10" × 8" × 70 I 2/ 14" × 1¼" Pl.
10" × 8" × 70 I. 2/ 14" × 2" Pl.
2/ 10" × 8" × 70 I 2/ 18" × 1" PL.
2'0"
7'6"
10" × 8" × 70 I 2/ 14" × 1¼" PL.
10" × 8" × 70 I. 2/ 14" × 1¼" Pl.
2'0"
2/ 10" × 8" × 70 I 2/ 20" × 2" Pl.
2/ 10" × 8" × 70 I 2/ 20" × 2" Pl.
2/ 10" × 8" × 70 I 2/ 20" × 3½" Pl.
4'0"

LOAD	550.	400.		700
STEEL SLAB.	A.	A.		C.
PILLAR BASE.	B.	C.		B.
Nº OF STANCHION.	48.	49.	50.	51.

INFORMATION SHEET : STEELWORK : CHECKING LIST AND STANDARD STANCHION SCHEDULE.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON. W.C.1.

Supplement to THE ARCHITECTS' JOURNAL for September 14, 1933

INFORMATION SHEETS

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STEELWORK : II

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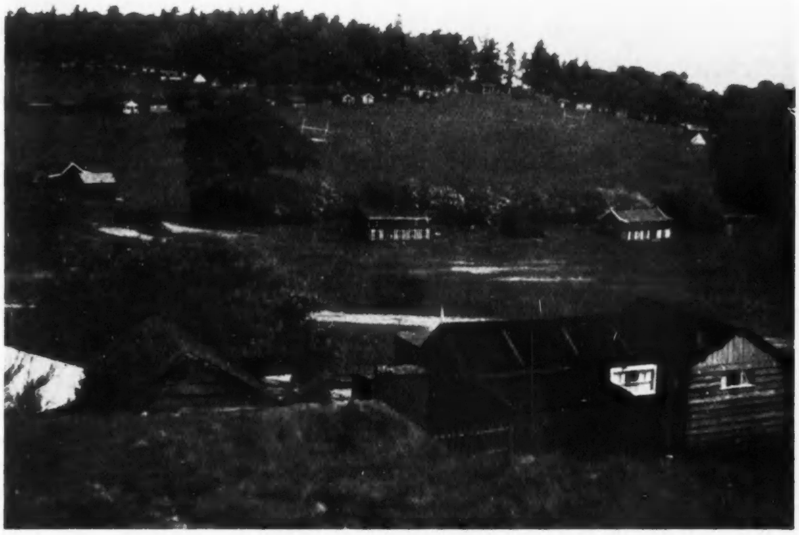
FOR a list of the Information Sheets previously issued, see the other Sheet accompanying this issue.

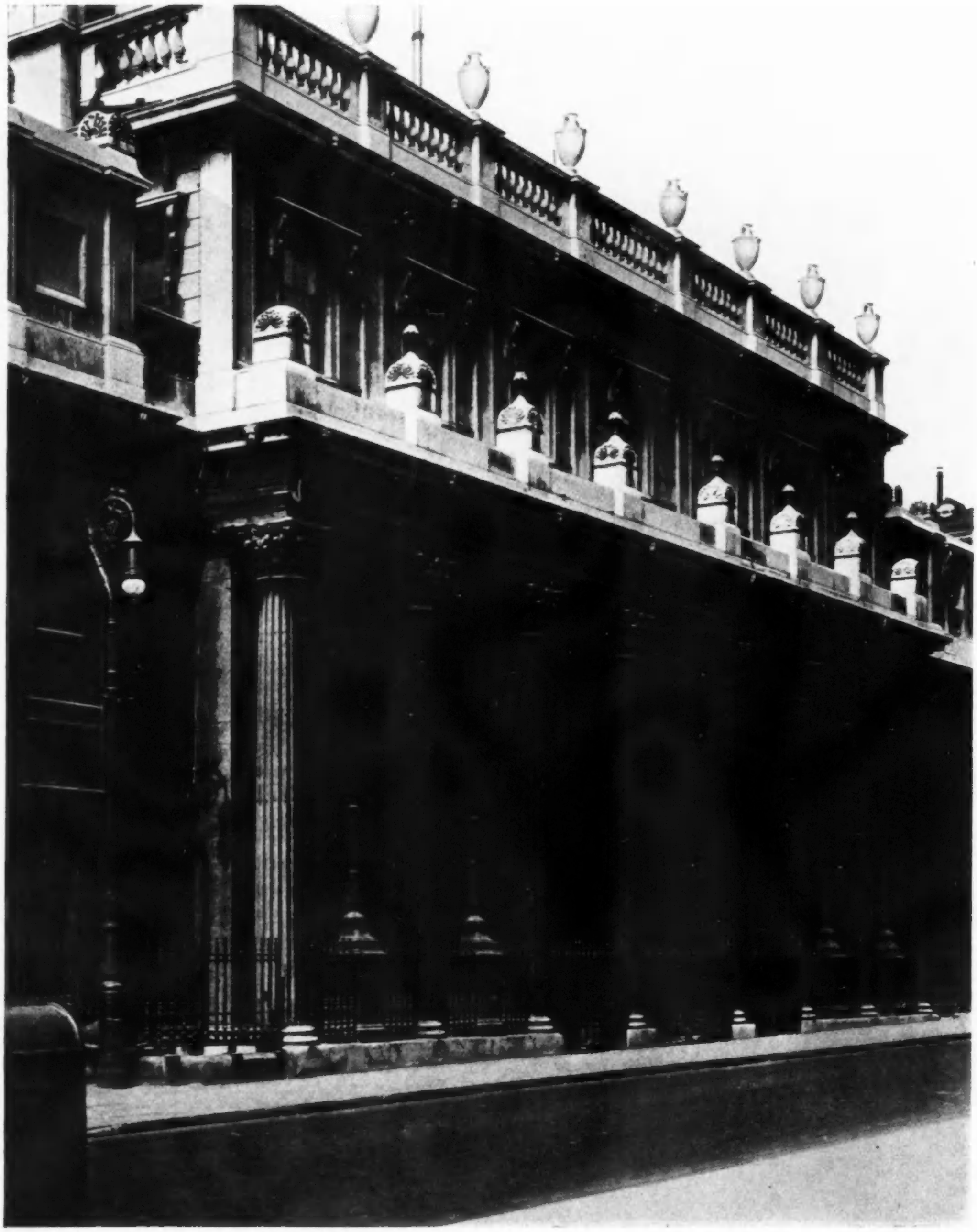
RURAL ENGLAND

THE WEEK-END PROBLEM



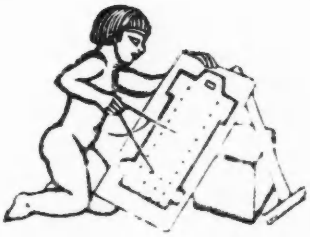
IT is unfortunate that people's natural desire to take advantage of the pleasures of the countryside should so often have the effect of spoiling the countryside for themselves and others. The week-end bungalow is a perpetual menace to rural amenities within reach of our big towns; and only immediate measures for planning and control, together with the awakening of the public conscience, can prevent man's total destruction in a few years of the pastoral landscape that his ancestors have built up.

The above photograph of week-end encampments at Swithland, Leicestershire, is taken from the "To plan or not to plan" exhibition held this month at Leicester under the auspices of the Council for the Preservation of Rural England.



THE BANK AS IT USED TO BE

The Threadneedle Street front of Sir John Soane's Bank of England, taken before the recent additions. Views of the same front showing the new additions, together with further illustrations of the new work, are given elsewhere in this issue. This photograph is reproduced from the book, THE OLD BANK OF ENGLAND, *published just before the rebuilding work commenced.*



REBUILD THE B.I.F.

SIX months ago we published an article urging the rebuilding of the British Industries Fair at Birmingham. More recently we printed an announcement to the effect that the Birmingham Chamber of Commerce had authorized new building work. This announcement was as follows :

> Extensions and re-arrangements of the British Industries Fair grounds and buildings at Castle Bromwich, which will increase the size of the Fair by two-and-a-half acres to fourteen acres, have been authorized by the Council of the Birmingham Chamber of Commerce.
>
> An official announcement issued by the committee states that provisional bookings of space by exhibitors for the Birmingham Section of the 1934 Fair are 37 per cent. greater than corresponding bookings last year for the 1933 Fair. Of a total available indoor space of 244,362 sq. ft., 177,907 sq. ft. have been provisionally booked already for 1934, in comparison with 129,926 sq. ft. provisionally booked at a corresponding date last year.
>
> Plans have now been approved having as an ultimate objective a permanent exhibition building with a total indoor area of 1,000,000 sq. ft., of which 500,000 sq. ft. will be available for exhibits. A 99 years' lease of the site has been negotiated.
>
> Immediately extensions are to be put in hand to add 55,000 sq. ft. of indoor area, of which 30,000 sq. ft. will be let to exhibitors, in time for the 1934 Fair. This immediate addition is part of the larger plan. The additional space to be provided for the 1934 Fair will be set aside for the gas, electricity, building and engineering groups in which congestion has become especially marked.

So money is to be spent on improvements to the exhibition buildings and grounds. But how is this money to be spent? If it is merely to provide more sheds—and to provide more sheds appears to be the sole ambition of the organizers—as an addition to the dozens that exist, then, surely, it is just another case of throwing good money after bad, so far as British industries are concerned. The existing buildings are obsolete; nothing is to be gained by adding a few more yards or furlongs to the already interminable labyrinths. Such an arrangement means more stand space, more goods shown, and more revenue from stallholders, but it means that buyers will be more readily discouraged.

It is not reasonable to expect buyers to come from all parts of the world to see our goods under such unplanned, uncontrolled conditions. At Castle Bromwich there is none of the order or spaciousness that is found in Continental fairs, and there is nothing to attract and everything to repel in the lay-out and general presentation.

There are no open turning spaces to permit hesitation and a momentary resting of the mind and eye from the confusion of ornamental, individualistic stands and exhibits, no focal point or climax, nothing to lend interest to the visual scene. The stands run in straight monotonous rows from end to end of the sheds (1,500 ft.), and the visitor is brought rudely into contact with them as he enters the building. He is thrust immediately, as we said six months ago in the aforementioned article, into the midst of "a confused jumble of miscellaneous-sized partitions, crowded booths and obstructing stanchions and roof trusses, devoid of co-ordination or coherence, which resembles—in so far as it resembles anything—an oriental bazaar, set down in the middle of a Canadian mining camp."

In less than half an hour his head aches, and he has more thought for escape than for British industries.

It is strange that those who are paying for space do not demand something better. Have they never seen exhibitions in other countries, or those planned by Mr. Joseph Emberton and the late Mr. Douglas Tanner at Olympia, where the lay-out is orderly and coherent, and where the stalls conform to a standard in height and scale and colour, so that the visitor is not bewildered by a chaos of conflicting elements, and the exhibitor is enabled to display his goods to the best advantage.

The British Industries Fair should be one of the world's best exhibition, instead of the worst. There is little wrong with the goods displayed in the Birmingham section—if we except those that rely for their effect upon applied art—and the implied intention of the Fair sponsored, remember, by the Government, is the stimulation of the sale of these goods throughout the world, to people who can produce similar goods for less money because they pay low wages.

We must depend therefore on quality, and the quality of British wares is notoriously high. The foreign buyer expects something near perfection; he has preconceived ideas, formed long before he sets foot in the exhibition grounds. He knows British workmanship is first rate ; he has seen the British article, but he must find his good impressions slipping fast when he is confronted by British showmanship.

The Architects' Journal
9 Queen Anne's Gate
Westminster, S.W. 1
Telephone: Victoria
6 9 3 6
Telegrams:
Buildable
Parl.
London

NOTES & TOPICS

EXIT METROLAND

NOW that the L.P.T.B. (to be known in future, we are told, as "London Transport") has taken over the Metropolitan Railway we are promised that the sham teak panels of the ramshackle old Inner Circle trains are to be decently veiled in the Underground's standard scarlet livery.

*

Already a subtle change is discernible in their gloomy, but no longer quite so dirty, interiors. The framed advertisements inviting hikers and others to "Explore Metroland," which were formerly issued from Baker Street, but now emanate from 55, Broadway, have had that speculatively-inspired geographical expression modified into "the Chess Valley."

*

The ominous name may be, let us hope, speedily and mercifully forgotten, except as Evelyn Waugh's ribald, and so devilishly appropriate, title for a super-profiteering peer. But the reality of thousands of "houses of character" will continue to flaunt the trail rampant commercialism has blazed across a once lovely and now almost "fully developed" and completely deruralized tract of Middlesex, Herts and Bucks.

*

Nor is this by any means all, architecturally speaking, of the old Metropolitan régime that remains. There are the original Victorian stations of grimy grey brick (sometimes half-heartedly refurbished with art-green tiling, crudely-disposed vitrolite poster-divisions, and leaded glass); then the complete, the "modern" reconstructions, like Great Portland Street and Euston Square, in gamboge faience classic; and finally that pathetic architectural Metromoan swan-song, barely a year old, the olde-worlde tithe-barn y-clept Stanmore Station.

*

Let us hope the "London Transport" have already scheduled the first group for early demolition. The others, unhappily, are likely to be with us as cautionary memorials of misguided taste and inappropriate design until the wholesale replanning of London calls for "architectural sacrifices" of a correspondingly wholesale nature.

*

THE COMFORT OF THE CABIN

A friend of mine who has just been on a sea voyage has been speaking his mind on the subject of hotel bedrooms in England. "The economy of planning aboard ship," he said, "where there is every convenience compactly arranged, makes one furious with the stupid wastefulness of the average English hotel bedroom."

*

"I would compel all hotel proprietors to take a voyage on a good modern liner," he continued. "They might realize then that a light over a bed, arranged so that it is possible to read by it, is appreciated by the public, and that receptacles that are simple in appearance and are planned to fit a space are preferable to lumping great Jacobean wardrobes that jut out into a room and make any comfortable arrangement of furniture impossible."

*

This is such a good idea, that I am thinking of starting a fund for the nautical education of hotel proprietors.

*

I shall call it the "Better British Bedrooms" movement. If I could only collect sixpence from everyone who has suffered from the needless miseries of an English hotel bedroom, I should soon have enough to charter the *Mauretania* for a trip round the world!

*

WAKING THE ELEPHANT

That famous monster the White Elephant of Muswell Hill—known also as the Alexandra Palace—is at last, it is announced, to be roused from slumber.

*

It has long been a pathetic spectacle, brooding unwanted and undisturbed above the suburbs of North London; for never has it, like its crystalline fellow-pachyderm of the southern heights, been illumined by the glowing admiration of the glass-conscious modernist, or more spectacularly by the popular pyrotechnics of summer Thursdays.

*

The A.P. has remained morosely Edwardian. Only an adjoining racecourse has kept its name in the public consciousness. But now, apparently, all that is to be changed; there is talk of a concert hall to seat 4,000 and boxing to entertain 5,000, and up-to-date lighting and ventilation—all to be conjured up inside the present dusty remnant.

*

Here is one piece of London, at least, that we can tinker with to our hearts' content, and have no fear that a future generation will call us vandals.

*

PLACE AUX DAMES

The Women's Engineering Society has just concluded its Eleventh Annual Conference at Crosby Hall. This event has prompted one of my readers to write and point out what Mr. Winston Churchill would call "an obvious void and a felt gap" in our own sadly under-represented profession.

*

So far, my correspondent insists, no specifically *ad hoc* organization exists to represent the separate professional status of Women Architects *qua* Women on the Registration Council.

*

Yet it is common knowledge that well over a score of ladies are in active practice ; quite a number of whom have built structures of one kind or another.

*

This grave and glaring anomaly appears an inexplicable oversight to my correspondent, who recalls that Sir Edwin Lutyens was the architect of the Y.W.C.A., "that symbolic (if slightly tardy) monument to sex equality which so bravely faces and completes the parent Y.M.C.A. across Great Russell Street."

*

Let me hasten to reveal a close secret.

*

Inspired rumours are current that Sir Edwin, who is the most chivalrous of men—is he not reputed to have said that the future of women in his own profession depends on which architects they marry ?—is already negotiating for a suitable site for an Inst. Reg. Wmn. Archs.

*

Indeed the only remaining uncertainties would seem to be which of three sites he will decide on—that next door to his own I.R.(Men)A., another facing the quite unconnected I.A.A.S., of which he is also President ; or (as a generous gesture of goodwill) one nearly opposite the new R.I.B.A. headquarters in Portland Place.

*

Also whether the I.R.W.A. will succeed in persuading him to design the building, or whether Sir Edwin will be obdurate in making it the subject of a competition "for ladies only ?"

*

WORDS

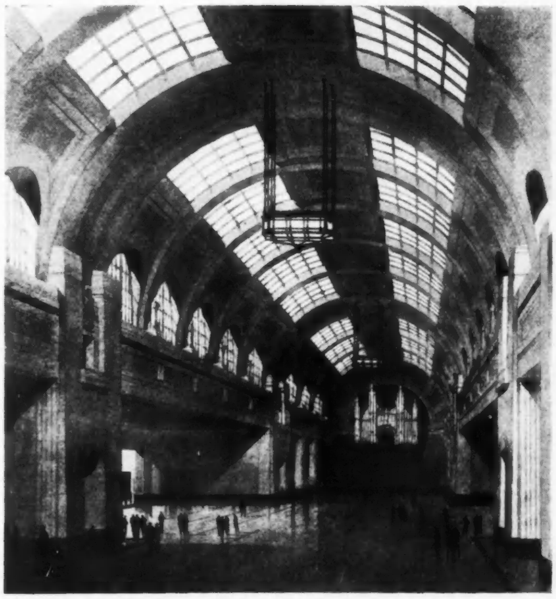
Have you noticed what a nuisance words are ? There is this word "function," for instance. Pure dangerous high explosive being thrown about as though it were a harmless cricket ball. "Planning," another word that used to stand for making up one's mind quite privately and without fuss on what one intended to do about something or other.

*

What is it now ? More high explosive, of course ; as used by the best people denoting a superior state of mental elevation in which whole destinies may be decided by writing a sort of poem in blank verse in which the word "planning" figures as a *leitmotif*. Terribly dangerous.

*

And on the other hand there are the *sapping* or *depressing* words, prominent among which I would place that foul creation "amenity" ; legal compromise-making, begging-the-question symbol to stand for as noble and active a thing as beauty ; the invention of some soul-less law-drafter who could not think of beauty and usefulness together and so wrote "amenity and convenience." I hope his days lack amenity and his ways convenience.



A perspective by the architect, E. C. Davies, of the proposed reconstruction of the Great Hall, Alexandra Palace. See Astragal's note.

*

Then to think that our language should ever harbour such a verb as "to *implement*," which you may gather deviously means to take action, a thing far too rare to warrant the need of a new word.

*

And that elevating word "architect" now stands for such men as practise the profession outside the pale of official registration, or such, perhaps, as decline to carry the burden of further useless words about with them.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, September 21

SHIPPING, ENGINEERING AND MACHINERY EXHIBITION. At Olympia. Until September 23.

EXHIBITION OF LIVERPOOL HOUSING SCHEMES. At the Central Lending Library, William Brown Street, Liverpool. Until September 30.

Friday, September 22

NATIONAL SMOKE ABATEMENT SOCIETY. At Sheffield. Annual Conference. Until September 24.

DESIGN AND INDUSTRIES ASSOCIATION. Visit to Holland, returning on September 26.

Saturday, September 23

Sunrise 6.46 a.m. Sunset 6.58 p.m.

Monday, September 25

LONDON SOCIETY. Visit to Electra House, Victoria Embankment, W.C.2. 4 p.m.

Thursday, September 28

LONDON SOCIETY. Visit to the Church of St. Alfege, Church Street, Greenwich. 2.45 p.m.

NEWS

●

POINTS FROM THIS ISSUE

The British Industries Fair should be the world's best exhibition instead of one of the worst 345

The Nautical education of hotel proprietors 346

Have we any direct guidance as to whether we should build high dwellings or make an effort towards the decentralization of industry? .. 349

There are 25,876 people living over three per room in Newcastle 362

865,000 gallons of sea-water automatically filtered and sterilized every 7½ hours 367

●

DR. NEURATH

Dr. Otto Neurath, Director of the Vienna Social and Economic Museum, is due to arrive in England early in November.

Dr. Neurath is the originator of the Vienna Method of pictorial statistics. This method consists of the presentation of statistical and other data by means of pictorial symbols. In this way, facts and figures are reproduced in the form of clear pictures, easy to understand, compare and remember. A set of posters illustrating the Vienna Method was recently exhibited in London.

We understand that Dr. Neurath is at present engaged in the preparation of a new set of symbols for the International Congress of Modern Architecture, which, it is expected, will be adopted by the MARS Group.

NEW BUILDINGS FOR BELFAST

The Belfast Corporation proposes to erect a large public elementary school, a free library, public baths and child welfare clinic at The Grove, Shore Road, Belfast, a large tract of waste land which has been recently acquired.

SLUM

On Monday last Sir Hilton Young, the Minister of Health, began a tour of the country to study the campaign against slums and other problems of local government. The areas now being visited by Sir Hilton Young include several controlled by local authorities who have not yet submitted schemes for dealing with the slum problems in their districts as called for by the Minister's five-year plan, set out in Circular 1331. Over sixty schemes have, so far, been received from a total of 1,717 housing authorities in this country. The latest date for submission of schemes is Saturday, September 30.

UNECONOMIC FLUCTUATIONS

The short-period stabilisation of employment in the building and construction industries is a task equally, or more important than long-period stabilisation. Seasonal fluctuations of the present amplitude involve the industry and the country in costs which can only be described as terrific.

The Special Committee for Public Relations of the Building Industries National Council is now conducting an investigation into these costs, and the means of combating the fluctuations which give rise to them. The cultivation of a more even tenour of trade throughout the year is one of the prime necessities of the industry at the moment. Everyone connected with the industry will wish to support this work.

Cheques for subscriptions should be made payable to "The Special Committee for Public Relations," and should be addressed to the Hon. Treasurer, at 5, Duke Street, Adelphi, W.C.2.

DEVELOPMENT OF A LIVERPOOL ESTATE

The Speke Estate of 2,300 acres, which was bought by Liverpool Corporation for £200,000, will ultimately become a completely equipped town if a scheme which has been prepared by the Housing Committee is adopted by the City Council (states *The Manchester Guardian*).

The existing aerodrome at Speke, which is to be enlarged to occupy 350 acres, is an integral part of the scheme. Of the rest of the area, houses will take up 791 acres and factories 476. The remaining 769 acres will be left for open spaces and public buildings, including a large public hall.

Two smaller housing areas are also contemplated as adjuncts to the main scheme. On these it is intended to build a hospital. Private enterprise, it is expected, would provide something like ten thousand new houses for these areas.

Provision is included for churches and schools, and for the laying out of fine "boulevards." In the area to be kept open it is suggested there should be a large open-air swimming pool, a stadium, and a golf course.

Resolutions have already been passed by the Council to spend £200,000 on new roads, sewers, and bridges.

SWEDEN'S NEW CO-OPERATIVE SOCIETY HEADQUARTERS

What is claimed to be one of the largest non-official buildings in Sweden, containing the offices, store-rooms and manufacturing plants of the Co-operative Consumers' Union, has just been completed in the southern part of Stockholm. The building is constructed of steel, concrete, brick and glass, and has a total frontage of 350 ft.

FALL IN BUILDING UNEMPLOYMENT

An impressive illustration of the volume of indirect employment and of purchasing power provided by building operations was quoted by Lieut.-Colonel C. W. D. Rowe, a member of the Building Industries National Council, at a meeting of the Ceramic Society held at Exeter last week.

Colonel Rowe stated that during the past six months, as compared with the same

+EDWARD DI GRA REX ANGLSARAN

A mosaic by Boris Anrep in the east corridor, ground floor, of the new Bank of England.

period a year ago, unemployment in the building trade had fallen by 14 per cent.; not, unfortunately, a very large reduction, but the putting to work upon building of even that proportion had meant that a brick manufacturing company with which he was concerned had been able during those six months to pay £130,000 more in wages, to buy 20,000 tons more coal, to take from outside sources four million more units of electricity (which meant the use of a further 3,000 tons of coal), and to give four hundred thousand more tons of traffic to the rail and transport industry.

"If you will form some mental picture," commented Colonel Rowe, "of the ever-widening circles of trade upon which these increases must have effect, and remember that they have come from but one of the forty to fifty trades that are concerned in the erection of a building, you can be left with no doubts as to either the value to the national well-being of a prosperous building industry or of its potentialities in a time like the present for quickening the life stream of monetary circulation."

A NEW CHURCH AT KENNINGTON

St. Anselm's Church, on the Duchy of Cornwall estate, Kennington, was consecrated by the Bishop of Southwark on Saturday last. The foundation stone of the new church, which stands on the site of the ancient Royal Palace of Kennington, was laid by the Prince of Wales some nineteen years ago. At the outbreak of the war building operations were stopped, and the structure stood derelict until last year, when construction was again started.

LIVERPOOL'S ART GALLERY

Prince George is to re-open, on October 4, the Walker Art Gallery, Liverpool, which has been closed for extension and reconstruction.

At the same time Prince George will open an exhibition, which will fill the extension and most of the old building, of pictures, sculpture and craftwork by living British artists. This exhibition will include a retrospective section, illustrating British art from Hogarth to Holman Hunt, a group of works by late members of the Royal Academy, and another of French Impressionists' and Post-impressionists' work to show the influences which have affected some phases of contemporary art.

The extension increases the linear wall-space of the gallery by more than a thousand feet.

CONCERT HALL FOR COLWYN BAY

Professor S. D. Adshead's design for a concert and conference hall at Colwyn Bay, to replace the burnt-out pier pavilion, has been submitted to the Colwyn Bay U.D.C. The new building is estimated to cost £50,000.

TOWN PLANNING SUMMER SCHOOL

A DIGSWELL DIARY

[BY THOMAS SHARPE]

LAST week there was held at Digswell Park Conference House, near Welwyn Garden City, the first English Summer School in Town and Country Planning.

On Monday evening, September 11, the "students" assembled, effected mutual introductions or renewed old acquaintanceships, and prepared themselves for the laborious week that lay ahead. On Tuesday morning they began their schooling in earnest, and in earnest they continued until midnight the following Sunday. Every day from early in the morning until far into the late hours of the night (for few evening lectures were over before 11 o'clock), they laboured mightily. An ordinary day contained three lectures or discussion classes, with at least one "visit of inspection" thrown in, while on one or two occasions an extra lecture was added as a special treat. Those who attended from first to last (and there were many) listened in all to 21 lectures, paid some six or seven visits of inspection, and were even regaled with a specially provided Saturday evening's entertainment. It is not surprising, therefore, that at the end of the week a few of the less hardy members had had a surfeit of talk. But they were few; the rest departed reluctantly and in the comfortable atmosphere of general satisfaction.

Since between forty and fifty members of a numerically small profession were in constant attendance at this strenuous school, while many more came in for the week-end, the organizers must have felt well pleased with themselves. And they had cause. In this their first venture, their arrangements were admirable; and the fare they provided was, with one notable exception, excellent, and all the more acceptable because much of it was already familiar.

Time was when town planning was a delightful subject for both the lecturer and the lectured. It afforded infinite scope for the beautifully vague. Those days are gone. Now it is apt to be a matter of grim references to Section 19 (2) (iii) (c) or some equally obscure section of the Act, and discussion among professionals is apt to centre around points of punctilio in procedure rather than upon principles. This being so, and the declared intention of the organizers being that "all proceedings will be of a definitely educational character and no resolutions will be submitted on questions of public policy," there seemed to be a real danger that the school might suddenly be terminated by the reaction of cumulative boredom causing the students to run amok down a Garden City cul-de-sac. It speaks much for the ingenuity of the promoters that there were no such catastrophes.

It is hopeless to attempt to report the wisdom that fell during 21 lectures and the discussions upon them—which latter probably accounted for another couple of hundred speeches. There was indeed rather a dead level of instruction and debate, from which but few peaks of originality stood out to give variety to the long journey. The Summer Schools with which we are most familiar from the press are those political gatherings at which an occasional sparkle and crackle of fireworks enlivens the proceedings and breaks up the encircling gloom. Some fireworks would have been useful here. There was too little contention; too much general agreement for the atmosphere to be entirely healthy.

Once or twice a voice of doubt was raised. Viscount Gage urged the need for more constructive planning rather than reliance on schemes which are entirely restrictive, saying that he feared that if planning was confined merely to the regulation and restriction of undesirable development there would in a few years be a reaction against control. That was a wise word. Another speaker attempted to put the case for Urbanism versus Garden City, and though his address* was ill prepared and worse delivered, the discussion which followed it revealed among many younger planners an encouraging dissatisfaction with modern planning methods. Sir Theodore Chambers, too, asked a series of pointed questions: "Have we really got a planning policy? In many cases we are putting the cart before the horse. A great measure of slum clearance is now being carried out with vigour. Does anyone know precisely the policy which should be linked up with slum clearance? Have we any direct guidance as to whether we should build high dwellings or make an effort towards the decentralization of industry? There are transport and other problems. Is any brain being given to linking up all these questions with town planning? I feel convinced there is not." And Sir Leslie Scott, urging the necessity for a national survey and a national policy, deplored the omission of agriculture from the operation of planning, and declared that the sprawling of towns over the countryside was a thing much to be deprecated.

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* The author's own paper!—ED., *A.J.*

The architectural side of planning was rather neglected—though that is simply a case of running true to form, for modern town planning can hardly be said to have any architectural bias. Perhaps Country Planning did not get all the attention it deserves, and certainly neither Civic Design nor City Improvement was once mentioned. And though residential and commercial planning were given their proper emphasis, it may be a justifiable criticism that at the Summer School, as in most other planning debates, the general attitude of mind was rather unpleasantly suburban.

Maybe these faults will be remedied next year—for it is to be hoped that this Summer School may become a yearly event (though perhaps a long week-end might be better than a full week?) In the meanwhile it is obvious that the School has served a very valuable purpose, and its organizers have deserved well of the planning movement.

The Honorary Secretary, Mr. James W. R. Adams, particularly, must have laboured hard and long. He made a splendid job of the arrangements; the whole thing went without a hitch. Mr. Adams obviously has great talent for this sort of thing. But was it really quite necessary, Mr. Adams, that these professional preservers of the countryside, gathered so studiously together at Digswell, should be warned, as they were on the syllabuses, that they must not pull or uproot the flowers or damage the shrubs?

R. I. B. A.

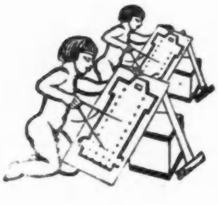
ARCHIBALD DAWNAY SCHOLARSHIPS, 1933/34

In accordance with the terms of the will of the late Sir Archibald Dawnay, the R.I.B.A. have awarded two Scholarships of £50 for the academical year 1933/1934, one to Mr. J. Muskett of the Liverpool School of Architecture, University of Liverpool, and the other to Mr. J. Holt, of the Armstrong College School of Architecture (University of Durham), Newcastle-upon-Tyne.

Mr. A. W. Varcoe, of the School of Architecture, Edinburgh College of Art, who was awarded a Scholarship of £75 for the academical year 1932/1933, and Mr. M. G. Gilling, of the Liverpool School of Architecture, University of Liverpool, who was awarded a Scholarship of £50 for the academical year 1932–1933, have been granted renewals of their scholarships for the year 1933/1934.

The scholarships are intended to foster the advanced study of construction and the improvement generally of constructional methods and materials and their influence on design.

COMPETITION



NEWS

INTERNATIONAL COMPETITION FOR ALUMINIUM FURNITURE

The International Congress of Modern Architecture has decided to offer to competitors in the Furniture Competition, which is being organized by the International Bureau for Aluminium, a special prize of 1,000 Swiss francs. The Congress is doing this in order to express in a practical way the interest it takes in the use of aluminium for decorative purposes. This prize (which brings the total amount of premiums up to 7,000 Swiss francs) will be awarded independently by a jury chosen from architects who are closely connected with the Congress.

In response to a large number of requests the International Bureau has agreed to postpone the closing date of the Furniture Competition until November 1.

Full particulars of this Competition appeared in the JOURNAL for May 3 last.

Competitions Open

September 23.—Sending-in Day. Proposed Town Hall for the Borough of Hornsey. Assessor: C. Cowles-Voysey, F.R.I.B.A. Premiums: £350, £250 and £150. Full conditions, etc., were published in our issue for May 17.

September 30.—Competition for speculative house designs, organized by the Architectural Association with the co-operation of Messrs. J. Laing and Sons, Ltd. Three types of house are required. Assessors: C. Lovett Gill, F.R.I.B.A.; L. H. Bucknell, F.R.I.B.A.; J. R. Leathart, F.R.I.B.A.; Arthur W. Kenyon, F.R.I.B.A.; T. Alwyn Lloyd, F.R.I.B.A.; and J. W. Laing. Premiums: £25 for the design placed first in each group. Copies of the conditions are being issued free, on application, to all members of the Architectural Association, and members of the R.I.B.A. can obtain copies (price 2s. 6d.) from Mr. F. R. Yerbury, General Secretary, The Architectural Association, 34-36, Bedford Square, W.C.1. Full particulars of the competition were published in *A.J.* for July 27.

December 4.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor: Thomas S. Tait, F.R.I.B.A. Premiums: £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1.

December 15.—Sending-in Day. Messrs. Jenson and Nicholson invite designs for the decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1. Latest date for submission of designs: December 15.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Proposed extensions to the Town Hall, Swindon. Assessor: Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere A.R.I.B.A.

Proposed town hall and municipal buildings, Stoke Newington. Assessor: Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

THIS ARSHETECTURE

Until recently, France was entirely without an atmospheric theatre . . . July last saw the opening of a new kinema at Bordeaux, in which the atmospheric idea was further developed.

In order to preserve the character of the kinema as a "hall of quality," most of the seats have been built as luxury seats.

The decoration owes much to that of the Rex in Paris. Particularly is this noticeable in the proscenium arch, which is a luminous rainbow in various colours, backed by a series of scalloped pelmets, which give a sense of rainbow reflection.

In front of the stage, where normally the orchestra would be, is a scene representing rocks, gardens and cascades, and the sides of the hall are decorated in the form of villas, garden pavilions, pagodas, etc. The ceiling is of an intense blue, with twinkling stars and striking effects of cloud, etc.

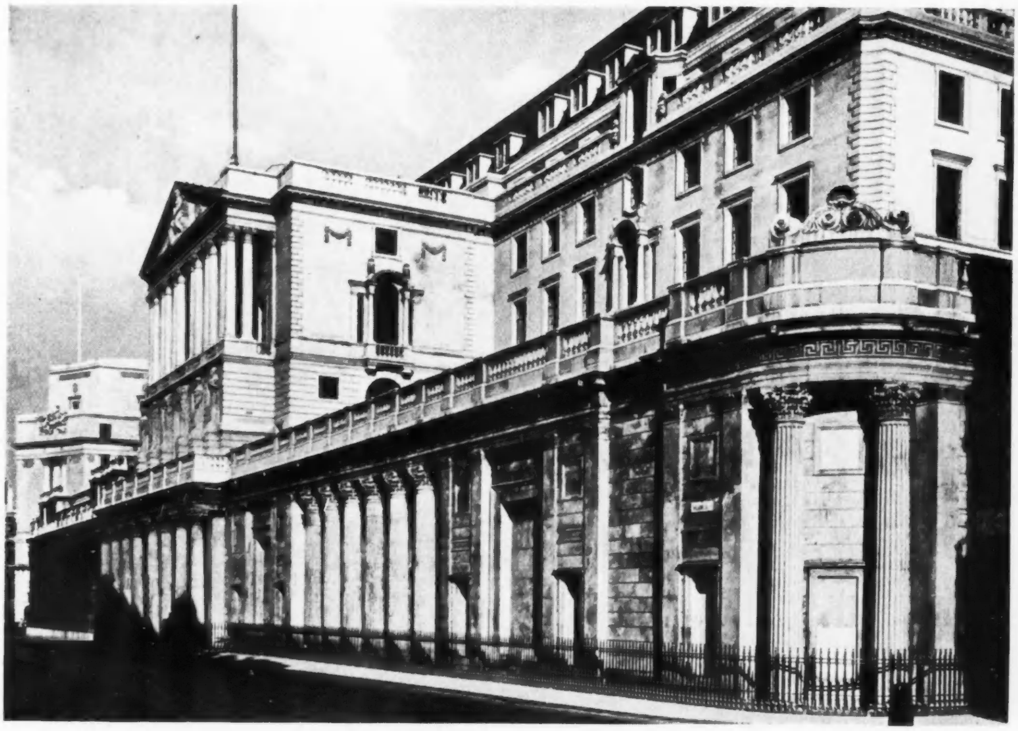
The façade of the building is conceived in modern style and brings to Bordeaux a note which is entirely fresh to the architecture of the town.

—*From* IDEAL KINEMA AND STUDIO.

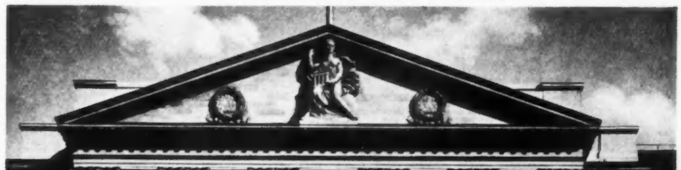
Change of Address

Mr. Wallace J. Gregory, F.S.I., M.I.ST.E., architect and chartered surveyor, has removed his offices to Vincent House, Vincent Square, Westminster, S.W.1.

THE NEW BANK OF ENGLAND

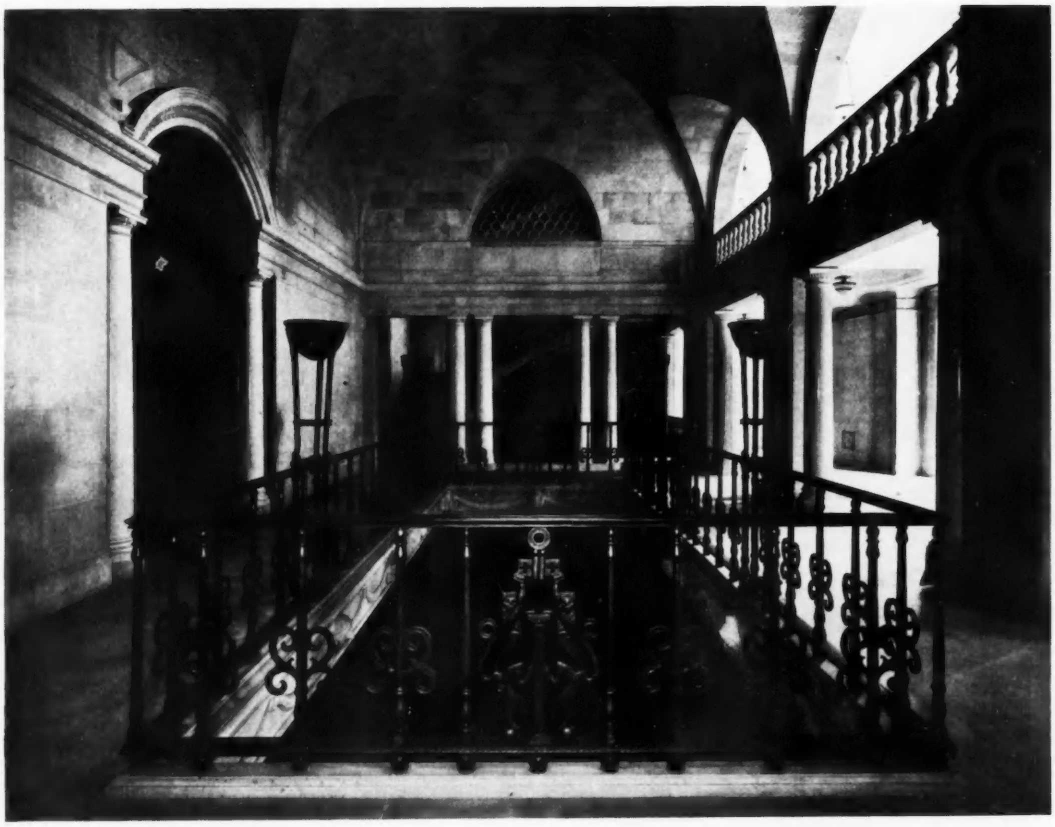


On this page are reproduced two photographs of the Threadneedle Street front of the Bank of England, the new additions to which are here seen rising above the screen wall of Sir John Soane's original building. Further illustrations of the additions are given on the pages following. Owing to the regulations of the Bank of England Council, plans may not be reproduced. It is a steel-framed building faced with Portland stone, the central portion having a tiled pitched roof with dormer windows. The sculpture and the doors in the lower photograph are by Charles Wheeler.



Architects: Sir Herbert Baker, R.A., and A. T. Scott. Supervising architect: F. W. Troup. Consulting engineer: Dr. Oscar Faber.

THE ADDITIONS TO THE



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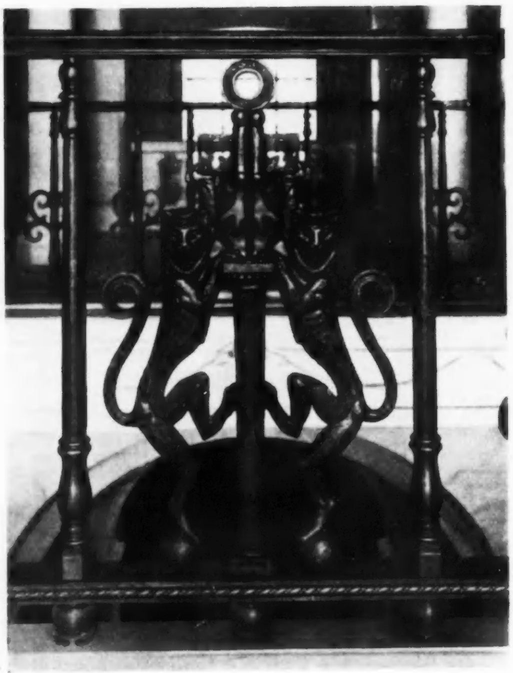

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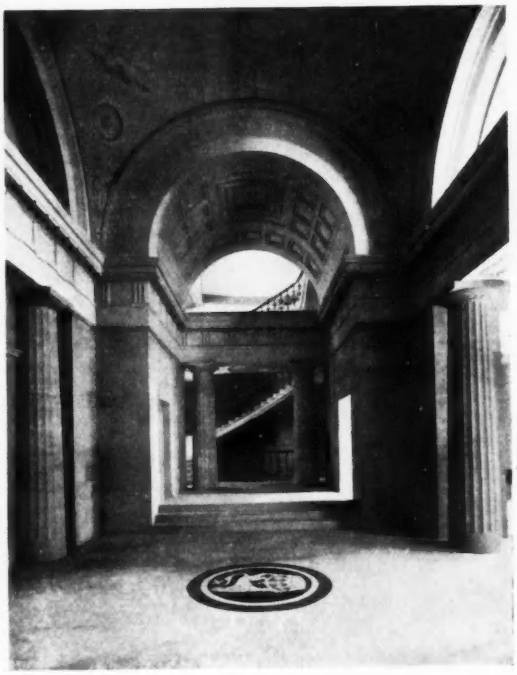

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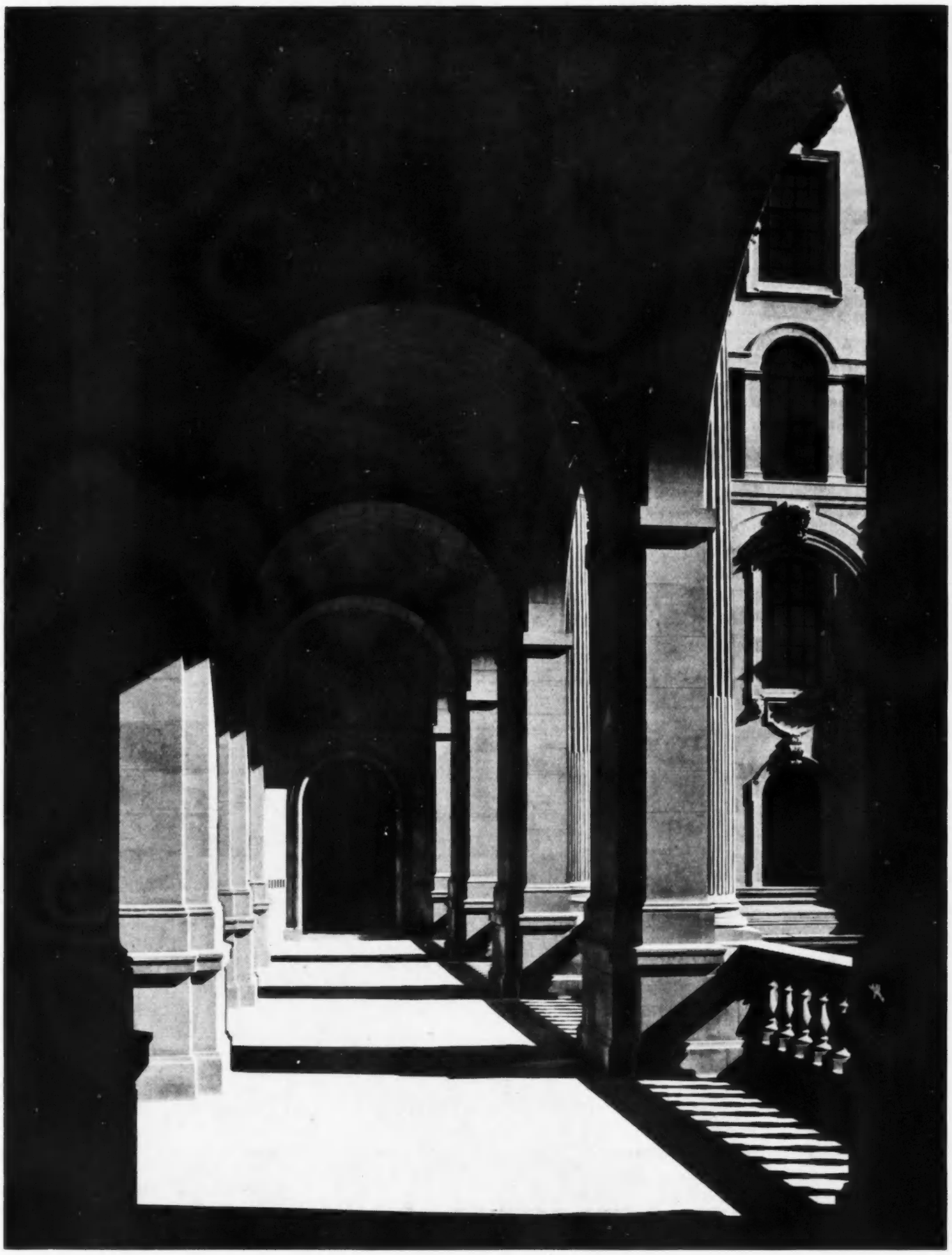
ARCHITECTS: SIR HERBERT BAKER, R.A., AND A. T. SCOTT

BANK OF ENGLAND



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The photographs on this and the facing pages show, 1: the main staircase hall to the Threadneedle Street front at first floor level, with the bronze railing modelled by Charles Wheeler; 2: a detail of the same railing; 3: the Threadneedle Street front entrance vestibule at third floor level, looking towards the main staircase (this vestibule is an exact replica of the old Princes Street vestibule at ground floor level, now demolished); 4: the east loggia of the garden court.

SUPERVISING ARCHITECT: F. W. TROUP; CONSULTING ENGINEER: DR. OSCAR FABER

LETTERS *FROM* READERS

A. GEOFFREY BAZELEY, M.A., A.R.I.B.A.
FREDERICK GIBBERD, A.I.A.A.
ROBERT TOWNSEND
FRANK P. BROWN

Registration

SIR,—During the recent discussions as to the desirability of registration for architects, I have not seen the question raised as to whether such a thing is in fact possible. Perhaps I am unduly easily discouraged, but my own experiences may be of interest to others who are considering attempting this feat.

In May of this year, having qualified for Associateship of the Royal Institute of British Architects, and being then up for election as such, I applied to the Architects' Registration Council for registration on this qualification. In reply I received a demand for 1s. for forms, which I sent, again clearly stating the qualifications under which I wished to apply.

In due course I received some forms which defeated me so completely that I eventually had to return them, repeating (for the third time) my qualifications, and asking under which section of the form I was to apply. This evoked an entirely different form, which actually did meet my case. I filled it in, enclosed my six shillings and eightpence, and on June 13, 1933 I got my receipt.

Drunk with success, I ordered some notepaper upon which I styled myself "Registered Architect," and decided that I had been unusually unlucky with the forms—a notion which was shortly dispelled by a friend who had also been applying for registration on the same grounds. At least I had only been asked for six-and-eightpence once!

Time passed. After about six weeks I ventured to write and inquire if and when I was likely to hear further of the matter; only to be told that it was being dealt with in due course.

Unfortunately I am completely ignorant of what *is* the due course in these matters. I should like it to be quite clear that I am not questioning for one moment the desirability of registration. On the contrary, a process which three months cannot accomplish must be dirt cheap at six shillings and eightpence plus one shilling for forms, and I would like to know more of it. I have not yet given up hope of joining the happy band myself; but 1934 is fast approaching, and anyone who is intending to try it should be warned that fourteen weeks is little time enough to catch the ears of Olympus, or be condemned to professional illegitimacy for ever.

A. GEOFFREY BAZELEY

A School near Paris

SIR,—Congratulations on your excellent review of André Lurçat's school at Villejuif. Such completely satisfying architecture is most refreshing after the pseudo Gothic, Georgian, and Modernistic piles that pass for architecture in this country.

What a wholly logical plan. It comes as almost a shock to find no quadrangle—that hallowed space in which young boys are said to stroll, unconsciously shaping the destiny of a country; but more often than not containing a mob of kids whose howls reverberate from the walls like the thunder of July.

Thank you for a comprehensive survey of the job; too often is Continental work represented by a stunt photo of some unusual piece of construction, with appropriate witticism.

FREDERICK GIBBERD

SIR,—I found great pleasure, as many other architects must have done, in studying the illustrations in the JOURNAL, for September 14, of a municipal school at Villejuif, designed by André Lurçat.

Architecture of this type has never yet been adequately dealt with in British journals and we must feel grateful to you for having given us the opportunity to study such a very fine example.

I have made further enquiries about this building and have discovered a book devoted to the school at Villejuif. I am sorry you omitted to mention this publication in your notice of the building, for not only is it excellently produced, but the price is only 4s. Many people, I am certain, would like to extend their study of this group of buildings.

No doubt, however, you are already familiar with this publication.

ROBERT TOWNSEND

[The book referred to by the above correspondent is *Groupe Scholaire de Villejuif*. Editions Architecture d'Aujourd-hui. Price. 15 f.—ED., *A.J.*]

London Buildings

SIR,—Mr. James MacQuedy has made a very brilliant analysis of my book *London Buildings* (Part I, English Art Series, Pitman). I did not imagine that the "background" in my picture of "English Art" was so highly coloured. The figures, landscape, statues, etc., to be added in Parts II and III (painting and sculpture) may tone things down a little and give a little more completeness to the picture.

The "immense courage" of my distinguished ancestor has not yet deserted me and I am still "marching on"—perhaps a little out of step.

FRANK P. BROWN

Town Planning Institute

The programme of the fifteenth annual country meeting of the Town Planning Institute, to be held at Cardiff from October 6 to 9 inclusive, has just been issued. The arrangements are as follows:

FRIDAY, OCTOBER 6: At the City Hall, Cardiff. Papers on: "Cardiff—Past and Present," by Mr. T. Alwyn Lloyd, F.R.I.B.A. (President); "The Cardiff City Town Planning Schemes," by Mr. G. H. Whitaker, M.INST.C.E., City Engineer; and "The Cardiff R.D.C. Town Planning Schemes," by Mr. Frank M. Elgood, C.B.E., F.R.I.B.A., 8 p.m. Civic Reception at the City Hall.

SATURDAY, OCTOBER 7: 10 a.m., Visit to the National Museum of Wales, Cathays Park; 11.15 a.m., Inspection of Cathays Park; 12 noon, Visit to Cardiff Castle; 1 p.m., Lunch; 2.15 p.m., Tour of Inspection of Rhiwbina Garden Village (by motor coach); 7.15 p.m., Institute Dinner at the Angel Hotel.

SUNDAY, OCTOBER 8: 10 a.m., All-day

motor coach tour through Pontypridd and the mining valleys, etc.

Full particulars of the Conference are obtainable from Mr. Alfred R. Potter, Secretary of the Institute, 11 Arundel Street, W.C.2.

L.C.C. School of Arts and Crafts

On October 4, Sir Banister Fletcher, PP.R.I.B.A., will deliver the first of a series of twenty-four weekly lectures on the History of Architecture (Mediæval) at the L.C.C. School of Arts and Crafts, Southampton Row, W.C.1. The lectures will commence at 6 p.m.

National Smoke Abatement Society

The following papers are to be read at the fifth annual conference of the National Smoke Abatement Society, to be held at Sheffield next week-end: "The Five Years' Clause and other matters arising from the Public Health (Smoke Abatement) Act, 1926," by Councillor W. Asbury, Chairman of the Sheffield, Rotherham and District Smoke Abatement Committee; "How the Citizen takes the Air—the personal significance of the Coal Smoke problem," by Mrs. Millicent Jast; "The Combating of Domestic Smoke in Industrial Areas," by Messrs. R. H. Clayton, M.SC., and Charles Gandy.

York County Hospital

The Court of Governors of the York County Hospital have approved a recommendation for the building of a new outpatient department, at a cost of £20,770.

Municipal Buildings, Preston

On Thursday last, September 14, Lord Derby opened the new municipal buildings, Preston, designed by Briggs and Thornely. The cost, including furnishings, was about £150,000.

New Hospital Building, Paddington

A new building, erected at a cost of £250,000, to supplement St. Mary's Hospital, Paddington, will be officially opened in October.

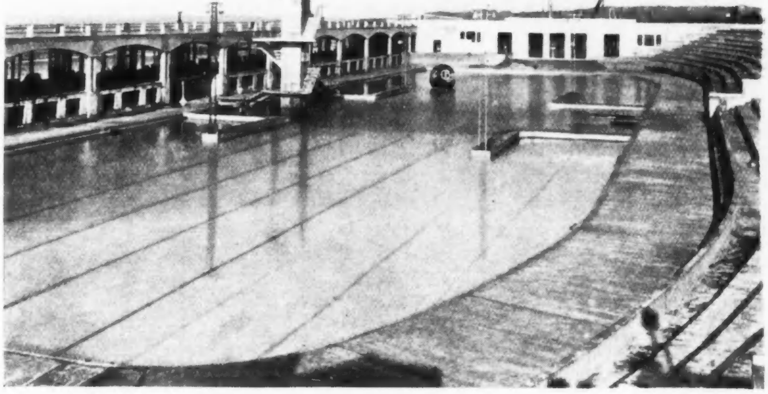
A £2,000,000 Bridge

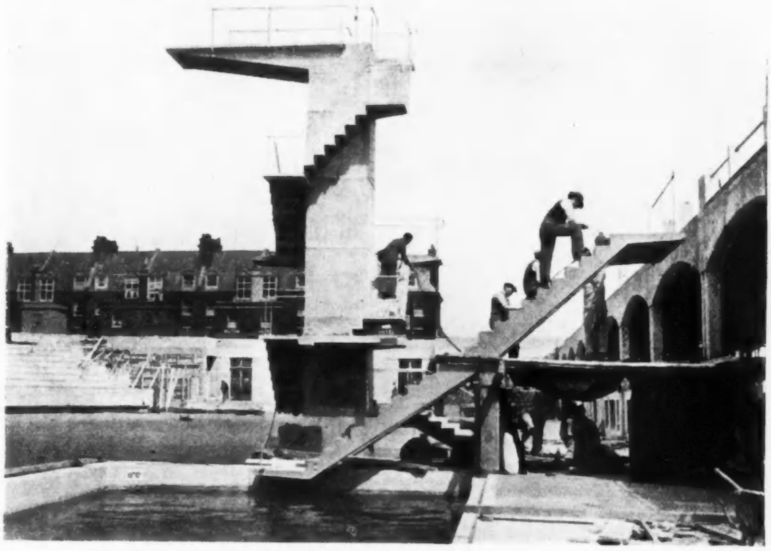
We understand that the Port Commissioners of Calcutta have received the sanction of the Government of Bengal to invite tenders for the construction of a cantilever bridge to replace the existing Howrah Bridge. The new structure is estimated to cost £2,000,000.

Abbey Restored after 400 Years

St. Mary's Abbey, Leiston, Suffolk, after being used for 400 years as a farm, has been restored for use by the Church of England.

HASTINGS OPEN-AIR BATH





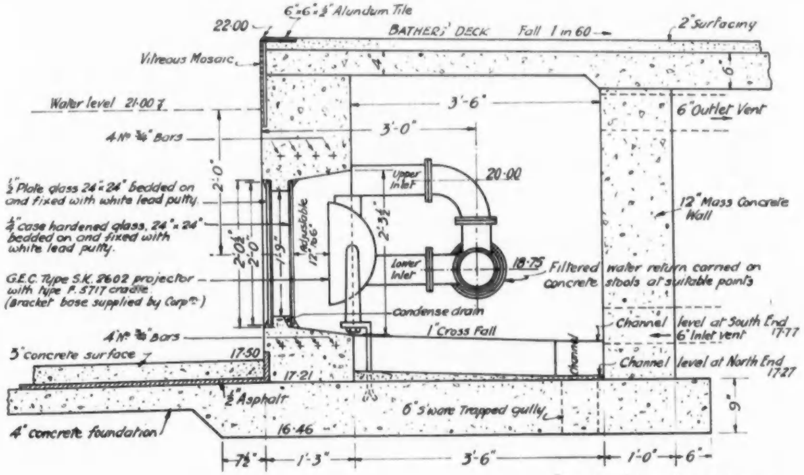
This open-air bath, newly completed at St. Leonards, 330 ft. long and 90 ft. wide, was designed by the Borough Surveyor. There are 1,000 bathers' cubicles under the superstructure and accommodation for 9,000 spectators on the grand stand and the lower and upper promenades. The construction is of reinforced concrete throughout, with an aggregate of uncrushed beach shingle. The tiers of the grand stand, which faces south, were poured in situ *on long pre-cast rakers. The eastern exterior wall has a reeded surface; otherwise all walls have a plain cement finish. The sun-bathing terrace on the mass-concrete sea-wall is faced with granite setts embedded in pre-cast blocks, and screened with glass.*

The outstanding feature of the bath is the reinforced concrete diving tower—almost identical in form to the well-known diving tower, designed by Herr Otto Zollinger, at the Vevey-Corseaux plage *on the Lake of Geneva. This was erected without scaffolding, the concrete being poured between form-work to just above the water-line, and built up beyond with hollow pre-cast sections. The joints are packed with lead wool. An iron-railed spiral concrete staircase, incorporated in the pre-cast sections, gives access to the spring board.*

DESIGNED BY S. LITTLE

OPEN-AIR BATHING POOL AT HASTINGS

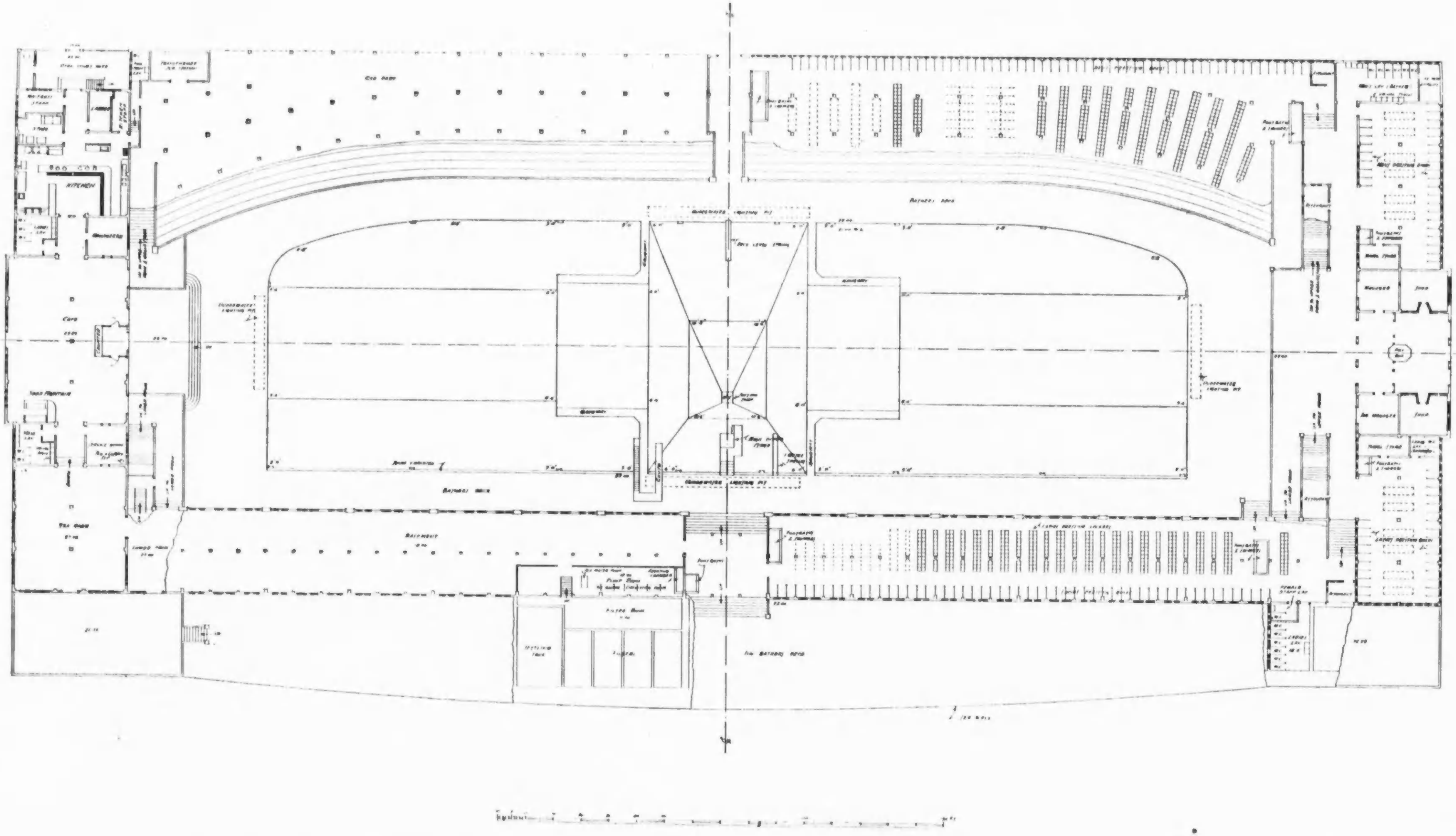
The lower promenade. It is flagged with 2 ft. × 2 ft. concrete tiles, laid with wide green cement joints. These were cast 49 at a time in a special mould.


6"×6"×½" Alundum Tile
22·00
BATHERS' DECK
Fall 1 in 60
2" Surfacing
Vitreous Mosaic
Water level 21·00
3'-6"
6" Outlet Vent
3'-0"
4 Nº ¾" Bars
2'-0"
20·00
Upper Inlet
½" Plate glass 24"×24" bedded on and fixed with white lead putty
12" Mass Concrete Wall
¼" case hardened glass, 24"×24" bedded on and fixed with white lead putty.
2'-3½"
Adjustable 12" to 6"
1'-9"
2'-0½"
2'-0"
Lower Inlet
18·75
Filtered water return carried on concrete stools at suitable points
G.E.C. Type S.K. 2602 projector with type F. 5717 cradle (Bracket base supplied by Corpⁿ.)
Condense drain
Channel level at South End 17·77
6" Inlet vent
1" Cross Fall
4 Nº ¾" Bars
Channel
3" concrete surface
17·50
Channel level at North End 17·27
17·21
½" Asphalt
9"
6" S'ware Trapped gully
4" concrete foundation
16·46
7½"
1'-3"
3'-6"
1'-0"
6"

By courtesy of CONCRETE

A detail of the system of under-water illumination.

The diving tower during construction.


KITCHEN
Cafe
Car Park
Tea Room
Bathers' Walk
Basement
Filter Room
Filters
Settling Tank
Attendant
Female Staff Lav.

The bottom of the bath is formed of 8 ft. by 8 ft. panels of white concrete, 2 ins. thick, laid on 6 in. slabs of reinforced concrete so as to break joint, with a ½ in. carpet of asphalt between. The side walls, 15 ins. thick above and 24 ins. below the water-line, also have a 2 in. concrete facing, poured in this case with sliding shutters, and mechanically polished after hardening. There is a blue vitreous-mosaic dado.

From 3 ft. 6 ins. at each end the floor slopes to a uniform depth of 6 ft. along a central 57 ft. strip, delimited by four L-shaped causeways. In the middle of it is a 28 ft. by 35 ft. rectangle for high diving where the depth shelves abruptly to 14 ft. 6 ins.

The under water illumination is provided by 500 watt flood-lights (recessed in pits behind the bath-walls as shown in the diagram on the facing page), 2 ft. below water-level.

The settling-tank, pump-rooms and filtration-plant are under the sea-wall. The same water, automatically purified and sterilized every 7½ hours, is used throughout the summer.

C

DESIGNED BY S. LITTLE

LITERATURE

THE WREN CHURCHES

[*By Grahame B. Tubbs*]

The Wren Society. Volumes IX and X. The Parochial Churches of Sir Christopher Wren, 1666–1718. Parts I and II. Issued only to subscribers. Oxford University Press.

THE publication of Volume X of the Wren Society completes half the programme that the Editors originally contemplated, and this half-way house is a convenient spot from which to survey the road already travelled, to review the discoveries made, and to look ahead and consider the land that still has to be mapped.

That the work of the Society has been abundantly justified is too obvious to need emphasis. It has already published a wonderful series of original drawings which have enabled a detailed study of Wren's method of working to be made ; it has made possible collations of drawings that would previously have been impossible owing to their wide scattering in Oxford Colleges, in the British Museum Library, in the Sir John Soane Museum, and in the Libraries of the Guildhall and the Royal Institute of British Architects ; it has provided a rich quarry of facts for the historian of the future in the printed building accounts and minutes, and incidentally by these means settled points of disputed authorship that have long been puzzles ; also the publicity that it has obtained has resulted in the bringing to light of material that might otherwise have remained hidden. As to the future, the Editors say in the Preface to Volume X : " Every drawing remaining unpublished that can be regarded as of importance in the entire collection of All Souls has now been photographed and will be given in due course." They also state that they have enough material already to fill all but three of the remaining ten volumes.

The tenth volume, like the ninth, is devoted chiefly to Wren's work on the fifty-four City churches that were rebuilt after the Great Fire. The aim of the Editors (Messrs. Arthur T. Bolton and H. Duncan Hendry) has been to present a picture of the churches as built, by means of the original drawings, old engravings and contemporary descriptions. Owing to the speed with which they were designed and erected, few originals remain, although drawings of twenty-three out of the fifty-four churches are reproduced in the two volumes. These are supplemented by the reproduction of the illustrations from Clayton's book that was published during 1848–9, and, in the tenth volume, to these engravings are added contemporary written descriptions from the *Parentalia* of Wren's son and from *The New View of London* which was published in 1709. The churches are further illustrated by 150 recent photographs of the buildings themselves and their fittings, arranged in groups.

Wren's ideas as to what a church for the Reformed Religion should be like are clearly set out in a letter that he wrote in about 1715 ; this is printed, and helps to explain the idea behind his amazingly ingenious solutions of the complicated problems that resulted from having to build on the old sites, and, in many cases, having to use the foundations of the previous church, and, in some cases, even the walling of the mediæval tower.

It is manifestly impossible, even if it were necessary, to print the building accounts of all the churches from the MSS. in the Ashmolean. The Editors have therefore selected St. Mary-le-Bow and St. Stephen's, Walbrook, as typical and have given these accounts *in extenso*, and they prove to be very interesting and instructive. With great diligence they have extracted the names of the tradesmen employed on all the churches and have set them out in a chart, with the names of the buildings upon which they worked and the amounts of their contracts. These names are interesting, both because they show the number of firms of importance in the metropolis and because they dispose of many wrong attributions ; for instance, contrary to popular opinion, Grinling Gibbons did no work in these churches except St. James's, Piccadilly, nor does Tijou's name appear, although work was done by the masons Edward Strong and Edward Pierce, a photograph of whose bust of Wren at the Ashmolean forms the frontispiece of Volume X ; Robert Streeter, the sergeant painter, carried out several painting contracts. One or two craftsmen who worked under Sir Roger Pratt at Clarendon House are represented in the accounts. The name of the measurer, Leo Sowersby, who worked for Pratt on the same building, also appears as a member of Wren's staff. An interesting appendix is a group of drawings submitted with their estimates by various contractors for the pewing and panelling of St. Stephen's, Walbrook. That submitted by Thomas Creecher was eventually carried out after modification.

Side-lights on the more human side of Wren's relations with his clients and the contractors are provided by extracts taken by Miss Davenport from the Vestry Minutes of St. Andrew's, Holborn, and St. Stephen's, Walbrook. For instance, from the latter, on February 19, 1672–3, there is an entry—" Dr. Christopher Wren, in consideration of his great care and extraordinary pains in contriving the design of the church and assisting in rebuilding the same, to be presented to him or his lady 20 guineas in a silk purse." This presentation was made at The Swan, in Old Fish Street, when Wren, his staff and the principal contractors were entertained at the cost of £9 9s. Again, in 1679, there was another dinner at which " Dr. Christopher Wren's lady " was presented with 10 pieces of gold. The next year there is an entry of £9 10s. for a hogshead of claret for Dr. Wren. It may be noted that the contracts were usually given within the parish.

Wren also is seen in his capacity of arbitrator, and there are several provisions for settlement of disputes. In one case, any difficulty had to be referred to the Dean of St. Paul's, the Principal of Thavies Inn and Sir Christopher Wren, or any two of them, Wren being one.

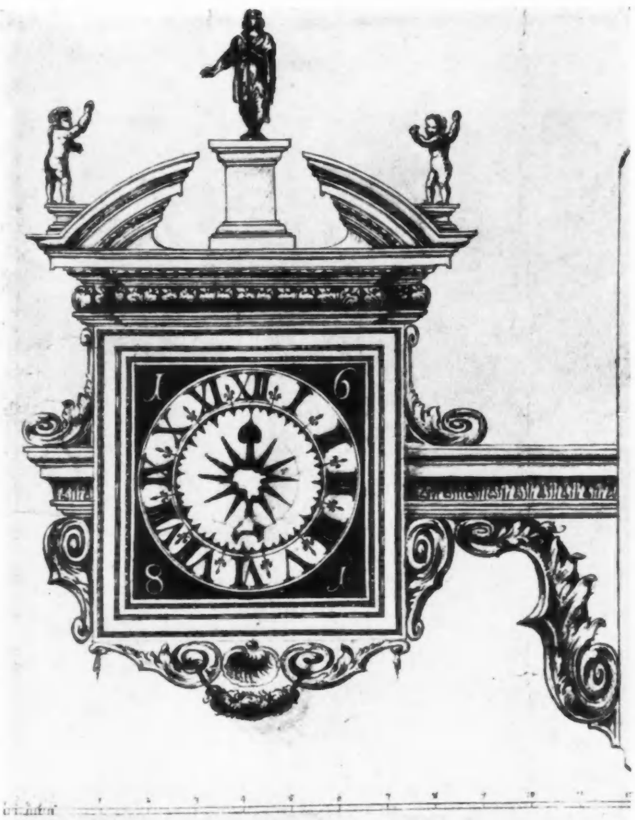
The period covered by the building of these churches is sixteen years—from 1670 to 1686, but no fewer than 16 of them were started in 1670, which must have been a very busy time for the architect. It should also be remembered that he was new to architecture, which two facts, together with the building materials famine, explain the rather rough finish and interior detail of some of these churches.

The total cost of 49 out of the 54 was £263,786, but several, such as St. Stephen's, Walbrook, were built with private funds, not at the public charge. The plates in this volume are mostly taken from the King's Library, British Museum, but the drawings of St. Mary's, Warwick, come from the All Souls' collection.

THE BRICKMAKING INDUSTRIES

Economic and Manufacturing Aspects of the Brickmaking Industries. Building Research Special Report No. 20. Price 2s. net.

THE present report deals with two sections only of a complete survey of the brickmaking industries which is being carried out by the Building Research Station. This survey, it is contemplated, will comprise



A design for a clock for St. Stephen's, Walbrook, 1681-2, by Sir Christopher Wren from the TENTH VOLUME OF THE WREN SOCIETY, *reviewed on the facing page.*

the study of all available literature and statistics, and a first-hand inspection of typical works, both at home and abroad. In addition to the sections now issued it is planned to publish four other sections of the survey dealing with outstanding technical problems, research and technical education, properties of bricks and brickmaking, and a programme of research.

The report gives a brief historical survey of the use of brick; commenting on the fact that, although brick in this country and on the Continent is still the staple material for domestic buildings, in America only one house out of every six built at present is of brick. The greater use of colour in recent years is remarked; multi-coloured rough texture facing bricks being increasingly used, and even burnt or misshapen bricks, once the refuse of the brickyard, being greatly sought for special purposes.

Dealing with the more usual types of brick, the report states that bricks of light weight are increasingly in demand. In France, Belgium and Switzerland perforated bricks are almost universal. They are also popular in Germany and in parts of America. The fletton cellular brick, however, now finding favour here, has, the report says, no real counterpart abroad. Fletton bricks, it is stated, possibly represent about one-half the output of "common" bricks made in this country, that is, bricks used for ordinary constructional purposes, usually within the structure. The flettons are made by the "semi-dry" press process in which the prepared clay, still containing sufficient moisture to ensure adherence of the fine particles, is pressed by pistons heated by steam or electricity to prevent the "green" bricks from sticking to them. In January, 1922, the monthly output of manufacturers of flettons was 22 million, in August, 1923, it was 40 million, and was thought to be the maximum possible. In 1930, however, the output is said to have been more than 1,200 million.

Dealing with the economic aspects of brick production, graphs are given showing the variation in prices of flettons and London stock bricks in the post-war years, and the effect of housing schemes on the price of bricks is discussed. The selling price of bricks fluctuates with periods of trade depression and boom, but apparently within a smaller range than most other manufactured products. "There is probably no doubt," says the report, "that the annual output has been greatly influenced by Government housing policy which determines to a considerable extent the domestic market."

The report discusses the factors involved in the cost of production as fully as possible in view of the scanty figures available in respect of significant items. For the brick and fireclay trades in the United Kingdom the Census of Production of 1930 indicates the cost of materials used as £5,808,000, the net output being £14,880,000, while the wages paid amounted to £7,370,000.

About 74,000 persons are employed in the brick and fireclay trades in this country. In 1914 the wages paid to the ordinary labourer were from 18s. 8d. to 30s. for a 56-hour week. From an enquiry made by the Ministry of Labour in 1928 covering over 35,000 workpeople, the average weekly earning was found to be 51s. 2d. In 1930 the normal hours for shift workers was eight per shift and for day workers 48 hours per week. The hours and rates paid in European countries are not greatly different from those usual in this country. American figures for 1924 give the average full-time earnings as $24.72 per 58.3 hours, $24·69 per 53.9 hours and $18.48 per 61.6 hours according to the process worked.

Trade Unionism is still weak in the brickmaking industries in this country, except in one or two districts in the north of England. The satisfactory maintenance of the quality of production still depends to a considerable extent upon the operative skill. For certain grades of manipulative skill some difficulty is being experienced in securing the right type of labour in England. Boys and women are employed in this country for machine operations to a far less extent than in certain parts of the Continent.

The report also discusses the question of imports, and the variation of the rate of output in the brick-making industry, with the process used and the type of brick produced. Sizes of manufacturing plants are also discussed.

There are, according to the report, some 1,300 brickmaking plants scattered throughout England and Wales. The production of bricks in 1924 was 4,066 million and in 1930 4,580 million.

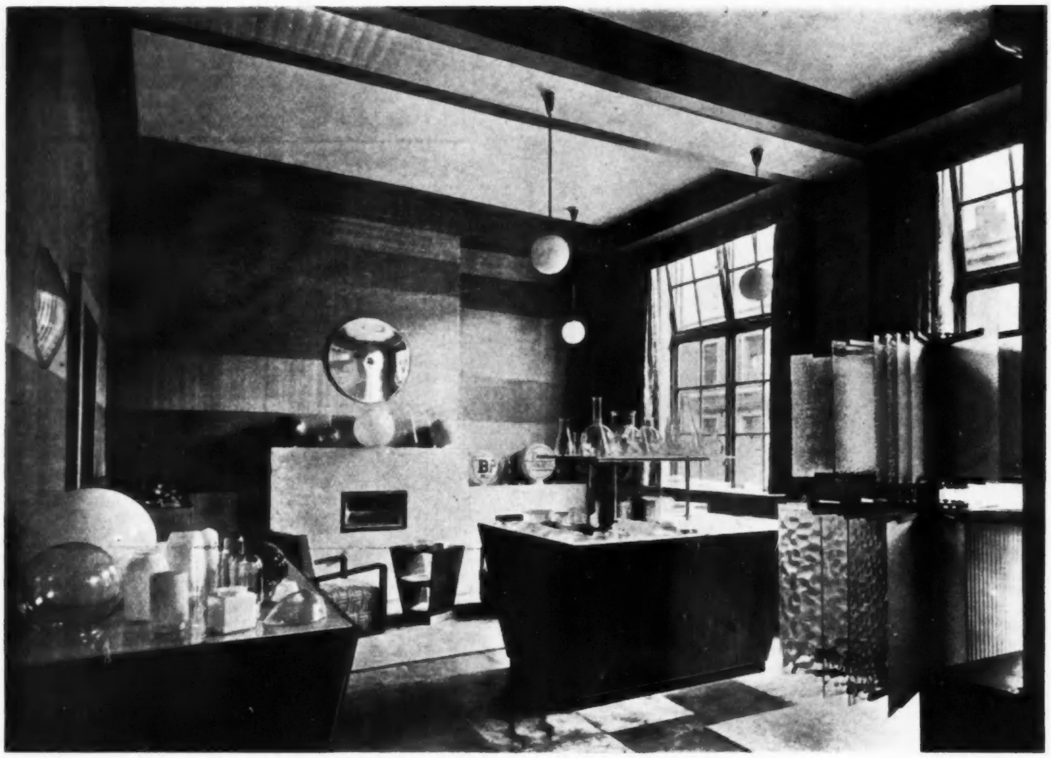
The transport question is also dealt with. In England considerable quantities of bricks are transported by rail. In 1929 the railways carried about 5,700,000 tons of bricks, blocks and tiles. Road transport of bricks is much used in England for hauls up to 50 miles, and for even longer distances. A small proportion of English bricks is transported by water, although it has been contended that canals offer the greatest potentiality for brick traffic. In Holland, for example, canals are extensively used, and river haulage is adopted in other parts of the Continent and in America.

Various manufacturing processes of bricks, such as hand-moulding, soft-mud, stiff-mud or plastic wire-cut, stiff plastic pressed or repressed and semi-dry pressed are fully dealt with in the second section of the report, and the operations involved in the making of a brick, in the winning of the raw material, its preparation and the firing of the moulded ware are fully described.

Announcement

The address of Mr. William Harvey (of "Dallinga," Lower Road, Gt. Bookham, Surrey), for the next three or four months will be: Survey to the Church of the Holy Sepulchre, c/o the Chief Secretary, Jerusalem, Palestine.

A GLASS SHOWROOM



DESIGNED

BY

L. H. BUCKNELL

AND

RUTH ELLIS

This showroom in an office building in Westminster has been designed for the display of glass manufactured by Chance Bros. The windows and glazed screens have been utilized for showing different varieties of window glass. The central show-table, displaying blown and pressed glass, is of half-inch birch plywood with walnut veneer and was designed by M. L. Anderson. The floor is in birch ply-wood in 2-ft. squares, and the walls in wood-veneer paper. The paint-work (dado, fireplace-surround, etc.) is of a shade of blue designed to provide a satisfactory background to the display of glass. The curtains are in brown, gold and cream.

SLUM

*[In our SLUM issue for June 22 we dealt with the housing and slum clearance problems in six cities : Liverpool, Leeds, Manchester, Birmingham, Sheffield, and Glasgow. Similar analyses of other cities have appeared as follows : Stoke-on-Trent (July 27) ; Bristol (August 24) ; Hull and Cardiff (September 7). Below we print the eleventh and twelfth of the series.—*Ed., *A.J.]*

[By PHILIP H. MASSEY]
B.Sc. (Econ.), F.R.Econ.S.

NEWCASTLE-ON-TYNE

GENERAL POSITION

Area	8,458 acres	
Population 1921	275,009	
1931	283,156	(30,000 unemployed)

Decennial increase 8,147

1931	Persons per acre	33·5
	Number of private families	69,786
	Population in private families	270,899
	Structurally separate dwellings occupied	60,118
	(vacant	466)
	Rooms occupied	240,792
	Persons per room	1·13

1921–31	Increase in occupied dwellings		4,197
	Increase in number of private families		9,602
	Families per occupied dwelling	1921	1·08
		1931	1·16
	Average size of private family	1921	4·37 persons
		1931	3·88 persons
	Average number of persons per room	1921	1·29
		1931	1·13
	Persons living more than 2 per room	1921	88,271 or 33·59%
		1931	63,216 or 23·34%
	(Families living more than 2 per room	1931	10,664 or 15·28%)

1931	Persons living over 3 per room	25,876
	3 and over 2	37,340
	Total over 2	63,216
	2 and over 1½	47,207
	Total over 1½	110,423
	1½ and over 1	53,265

562 families living 6 or more in 1 room
834 families living 8 or more in 2 rooms
134 families living 10 or more in 2 rooms

The Wards

Number of wards in city	19
Number of wards containing over all average of over 100 persons per acre	2
Number of wards containing over all average of over 80 persons per acre	6
Number of wards containing over all average of over 1 person per room	12

Three Worst Wards on Persons Per Acre Standard

	No. 10 Westgate	No. 14 Byker	No. 15 St. Lawrence's
Acreage.. ..	90	139	180
Population 1921	15,489	17,507	19,713
1931	13,460	15,585	17,531
Persons per acre	149·6	112·1	97·4
Private families	3,619	3,811	4,291
Population in private families ..	13,406	15,485	17,349
Structurally separate dwellings occupied ..	3,042	3,320	3,863
Rooms occupied	10,520	10,706	11,121
Persons per room	1·27	1·45	1·56

Three Worst Wards on Persons Per Room Standard

	No. 2 All Saints	No. 6 St. John's	No. 15 St. Lawrence's
Acreage ..	178	169	(As above)
Population 1921	17,416	15,310	
1931	14,508	13,450	
Persons per acre	81·5	79·6	
Private families	3,512	3,390	
Population in private families	13,695	12,829	
Structurally separate dwellings occupied ..	2,269	1,782	
Rooms occupied	7,630	8,052	
Persons per room	1·79	1·59	

Number of houses built, persons displaced, etc., in connection with slum clearance and improvement schemes

Three areas cleared in 1924-5 comprised together :—

190 houses
546 dwellings
2,209 persons

(4 persons per dwelling and 11½ per house.)

Altogether 993 houses have been built to date for occupation by
4,835 persons *from clearance areas.*

(584 of these houses have been erected under the "Five Year Programme.")

Five-Year Programme of slum clearance and rehousing approved by Council, December 1930

This programme involves altogether the *displacement* of 9,604 persons and the erection of 2,088 houses to accommodate them.

15 areas are *now being dealt with*, comprising

1,272 houses
2,388 dwellings
6,764 persons

(nearly three persons per dwelling and over five per house).

Rents per week of slum houses demolished

1 room dwellings, 3s. 6d. to 5s.
2 room dwellings, 4s. to 7s. 6d.
3 room dwellings, 6s. to 9s.
4 room dwellings, 7s. 6d. to 12s. 6d.

Rents per week of new houses built under 1930 Act

3 room, 6s. 9d. and 7s. 7d. inclusive.
4 room, 8s. 7d. and 9s. 6d. inclusive.

It can be seen that the rents charged for each of these classes of dwelling lie within the variations in the slum houses demolished.

But no mention is made of one and two room dwellings—presumably many of the people previously inhabiting such dwellings will share larger ones when rehoused, or be forced to seek fresh slums.

Newcastle has a name for excessive rent charges by landlords and as a result of a special enquiry held in the period November 1931 to February 1932, which disclosed an amazing number of extortionate rents, charged for both decontrolled and controlled dwellings of all kinds, the Council has established an Enquiry Bureau for tenants. In several cases the decontrolled rents were three times pre-war, and therefore twice the controlled rent.

Overcrowding and General Slum Conditions

"Overcrowding is still very prevalent, despite the fact that 12,000 new houses have been provided in the City since the war. The worst of the City's slums are being dealt with, and seven of the areas have now been cleared."

(Official information.)

Reaction of slum dwellers to new environment

"Generally speaking tenants from slum areas have responded quite well to their new surroundings. They are appreciative of the extra amenities afforded by a Council house, and show particular keenness in the cultivation of their gardens. There is a small minority, however, in whom the habits of slums are deep-seated, and who make little effort to preserve cleanliness in their new homes."

(Official.)

CONCLUSION

25,876 people living over 3 per room (assume average 4) have 6,500 rooms. They should have 17,250, and therefore need 10,750 more.

37,340 people living 3 and over 2 per room (assume average 2½) have about 15,000 rooms. They should have 25,000, and therefore need 10,000 more.

47,207 people living 2 and over 1½ per room (assume average 1¾) have about 27,000 rooms. They should have 31,500 and therefore need 4,500 more.

The minimum requirements to abate overcrowding appear to be over 25,000—the maximum (if all the houses were unfit) comes to 73,750.

(The extremely large number of the very overcrowded can be seen in the fact that the maximum and minimum are much closer than in the case of the other towns—the proportion is less than 1 : 3 in place of the usual 1 : 4. The numbers in the "over 3" and the "3 and over 2" classes form a much greater proportion than in other English cities.)

Raising these figure by 25% in accordance with the general rule gives, say, 32,000 and 92,000. Following our general rule, the requirements of Newcastle are about 55,000 rooms, or, say, 13,000 houses.

Evidence as to the number of insanitary houses is not sufficient to justify an attempt to modify this figure. Enough is known, however, of the large number of courts with no water in the houses, with shared lavatories, and of the wetness and verminous condition of these, to make it quite certain that far more than 5,000 insanitary houses—the number arrived at by the formula—in fact exist. The figure of 13,000 is therefore far too low.

BRADFORD

GENERAL POSITION

Area	24,343 acres	
Population 1921	291,004	
1931	298,041	(20,000 unemployed)
Decennial increase	7,037	

(1921 population of areas added in intercensal decade 5,043)

1931	Persons per acre		12·2
	Number of private families		84,583
	Population in private families		288,179
	Structurally separate dwellings occupied		83,148
	(vacant		1,330)
	Rooms occupied		327,922
	Persons per room		0·88
1921-31	Increase in occupied dwellings		8,805
	Increase in number of private families		9,677
	Families per occupied dwelling	1921	1·01
		1931	1·02
	Average size of private family	1921	3·80 persons
		1931	3·41 persons
	Average number of persons per room	1921	0·97
		1931	0·88
	Persons living more than 2 per room	1921	not comparable
		1931	19,925, or 6·91%
	(Families living more than 2 per room	1931	3,074, or 3·63%)
1931	Persons living over 3 per room		3,526
	3 and over 2		16,399
	Total over 2		19,925
	2 and over 1½		37,090
	Total over 1½		57,015
	1½ and over 1		59,578

23 families living 6 or more in 1 room
113 families living 8 or more in 2 rooms

The Wards

Number of Wards in City	22
Number of Wards containing over all average of over 100 persons per acre	Nil
Number of Wards containing over all average of over 80 persons per acre	Nil
Number of Wards containing over all average of over 1 person per room	4

Three Worst Wards on Persons Per Acre Standard

	Lister Hills	Manningham	West
Acreage	320	449	162
Population 1921 ..	16,065	22,951	9,382
,, 1931 ..	14,583	20,907	7,623
Persons per acre ..	45·6	46·6	47·1
Private families ..	3,929	6,079	1,915
Population in private families ..	13,592	20,424	6,514
Structurally separate dwellings occupied ..	3,773	5,852	1,737
Rooms occupied ..	15,515	22,974	5,582
Persons per room	0·88	0·89	1·17

Three Worst Wards on Person Per Room Standard

	Exchange	North	West
Acreage	119	353	(As above)
Population 1921 ..	2,882	11,860	
,, 1931 ..	2,717	10,465	
Persons per acre ..	22·8	29·6	
Private families ..	673	2,686	
Population in private families ..	2,451	9,736	
Structurally separate dwellings occupied ..	643	2,655	
Rooms occupied ..	1,868	9,071	
Persons per room	1·31	1·07	

General Notes

The Bradford houses are in general well built, stone.

Thousands of them are nevertheless unhealthy.

Thousands of them are back-to-backs.

Bradford is very hilly, and the builders of a century ago therefore crowded their houses as much as possible.

70 or 80 to the acre, as in Leeds, is common for the back-to-backs.

Where the houses were built on steep hills, it was common to build a basement under the side where the ground fell away. These one-room basements are still used.

Bradford requires considerably over 10,000 lavatories for each house to have one. It requires over 13,000 dustbins. This is the number of ashpits in use. Ashpits are cleared about once every six weeks.

But Bradford is keeping up with population increase, and almost keeping up with the increase in the number of private families.

The Annual Report of the Medical Officer of Health for 1931, states that :—

"Many very serious cases of overcrowding continue to the knowledge of the department during the year, but despite the increase in the provision of houses there still remains a great scarcity of housing accommodation. . . ."

"Economy" has necessitated the postponement of the clearance and improvement schemes, and the postponement of the chance of other clearance or improvement areas being scheduled.

Five Year Programme of Clearance and Improvement under 1930 Act

In December, 1930, the City Council approved a Five Year Programme. This provides for dealing with :—

3 clearance areas containing 1,805 houses.

Demolition of 500 unfit houses in improvement areas.

Some 200 Corporation houses had been set aside for rehousing the people from one of these clearance areas (for which the sanction of the Ministry of Health had been obtained) when the economy campaign caused postponement of the whole scheme.

Rents

Rents of houses provided in connection with the White Abbey Scheme :—

298 houses containing living-room and 3 bedrooms at 6s. 8d. net rent per week.

66 flats containing living-room and 1, 2 or 3 bedrooms at 5s. 9d. to 6s. 9d.

24 single-room dwellings at 2s. 10d.

The rents of houses demolished in this area were 3s. to 8s. per week.

The Work of the Council in regard to Individual Unfit Houses

The fact that clearance and improvement schemes have had to be postponed does not mean that the Council is idle. Considerable work is being done in respect of individual unfit houses.

The provisions of the Housing Act, 1930, enable houses classified as unfit to be dealt with in two ways. If the local authority classifies a house as repairable at a reasonable cost, then under Section 17 the person having control of the house may be required to repair it. (Note.—There is power to act in default and recover cost if necessary.)

2,046 notices have been served under Section 17.

1,430 have been complied with.

If the local authority classifies it as not repairable at a reasonable cost then it is to be demolished under Section 19, unless the owner undertakes either :—

1. That the house shall not be used for human habitation, or
2. That he will within a specified time make it fit—to the satisfaction of the local authority.

Under this section :—

52 undertakings have been given that houses would not be used for human habitation.

225 undertakings have been given to make houses fit.

84 Demolition Orders have been made.

39 houses have been demolished.

The following long extract is taken from *The Manchester Guardian* of 15 February* ; it describes the kind of work to which the above statistics refer :—

"The Corporation draws up schemes for partial clearance and reconditioning, which it submits to the owners, and in this way quite large areas are being dealt with. Three courts off the Otley Road, standing on rather more than an acre, are being reconditioned in this way at the present moment. The houses on the main road are mostly shops, and these are being left untouched. The houses on the side streets and in the courts are being reduced in number from 76 to 47. With one or two exceptions all these houses are back-to-back. After reconstruction there will be 18 through houses and 29 back-to-back, but all these latter will be provided with front and side ventilation on both floors. Where a through house is made by throwing two back-to-backs together, the second staircase must be removed. In every case a proper food store must be provided, ashpits must give way to metal ashbins, and each house must have its own separate water closet (nearly always indoors). In a number of cases baths are being provided. The total cost to the owners will probably not fall far short of £4,000 for these three courts, but in return they will have houses which, built as they are of good stone, should have a long and useful life. The scheme does not cost the Corporation a penny.

Back-to-Back Houses

"A similar scheme has now been drawn up for dealing with two long terraces of back-to-back houses where at present the sanitation is exceedingly bad. Between the two rows the land falls away, with the result that there has been space at the back for a line of single-room basement dwellings below the street level. This backyard is badly paved, and the most prominent feature is the long range of lavatories. In theory these lavatories are private and should be kept locked, but in practice they are to a large extent treated as communal, and therefore it is impossible to keep them properly clean. The tenant of a house facing the street will have to walk up the street through a dark passage and down the miserable backyard to reach his lavatory. Under such conditions decency is impossible. The scheme for dealing with this district provides for the demolition of sufficient houses to give through ventilation on lines similar to that of the Otley Road courts and also for the filling up to the street level of the sunk backyard. It will make a thoroughly unhealthy area into a place where families can live in decency and privacy."

The White Abbey Clearance

This is the one great post-war clearance.

A few statistics are available :—

Area 15 acres (this includes 4¼ acres which were included so that the site would be redeveloped as a whole).

Population about 2,000.

Number of houses about 500.

420 had no separate lavatory.

123 houses shared 60 privies.

320 houses shared 158 w.c.'s.

14 of them shared one ashpit.

Infantile mortality rate 276 per 1,000, compared with 113 for city.

Tuberculosis death-rate 4·23, compared with 1·43.

(The city rates are abnormally high.)

CONCLUSION

Bradford is comparatively free from the worst forms of overcrowding—only 3·63 per cent. of the families and 6·91 per cent. of the population live over 2 per room. By the standards of other towns this is very good !

But it must be emphasized that the work which has been described above means that a considerable amount of further overcrowding will be caused unless this work is accompanied by a commensurate provision of houses.

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* By permission of the Editor of *The Manchester Guardian*.

3,526 people living over 3 per room (assume average 4) have 900 rooms. They should have 2,400, and therefore require 1,500 more.
16,399 people living 3 and over 2 (assume average 2½) have 6,500 rooms. They should have 11,000, and therefore require 4,500 more.
37,090 people living 2 and over 1½ (assume average 1¾) have rather over 21,000 rooms. They should have about 24,600, and therefore require 3,500 more.

On the usual basis the minimum needs are therefore 9,500 plus 25 per cent.—i.e., 12,000. The maximum needs are 38,000 plus 25 per cent.—i.e., 47,500. The geometric mean is about 24,000. In view of the fact that the Five Year Plan proposed the demolition of 2,305 houses, and that a considerable number of houses will disappear through the reconditioning of back-to-backs and courts, it is certain that the housing needs of Bradford amount to at least 35,000 rooms, or 9,000 houses. This figure accepts the idea of reconditioning back-to-backs by converting them. If all back-to-backs were to be demolished, it would be much higher, certainly 15,000.

SUMMARY

The following figures represent the results arrived at prior to the consideration of Newcastle and Bradford :—

Population 5,918,480.
271,358 living over 3 per room.
1,426,211 living over 1½ per room.*
304,250 rooms required merely to abate overcrowding at over 1½ per room.*
311,500 houses required altogether.

The analysis of Newcastle gives the following results :—
Population 283,156.
25,876 living over 3 per room.
110,423 living over 1½ per room.
32,000 rooms required merely to abate overcrowding at over 1½ per room.
13,000 houses required altogether.

The analysis of Bradford gives the following results :—
Population 298,041.
3,526 living over 3 per room.
57,015 living over 1½ per room.
12,000 rooms required merely to abate overcrowding at over 1½ per room.
15,000 houses required altogether.

Totals for Twelve Cities

Population 6,499,677.
300,760 living over 3 per room.
1,593,649 living over 1½ per room.*
348,250 rooms required merely to abate overcrowding at over 1½ per room.*
339,500 houses required altogether.

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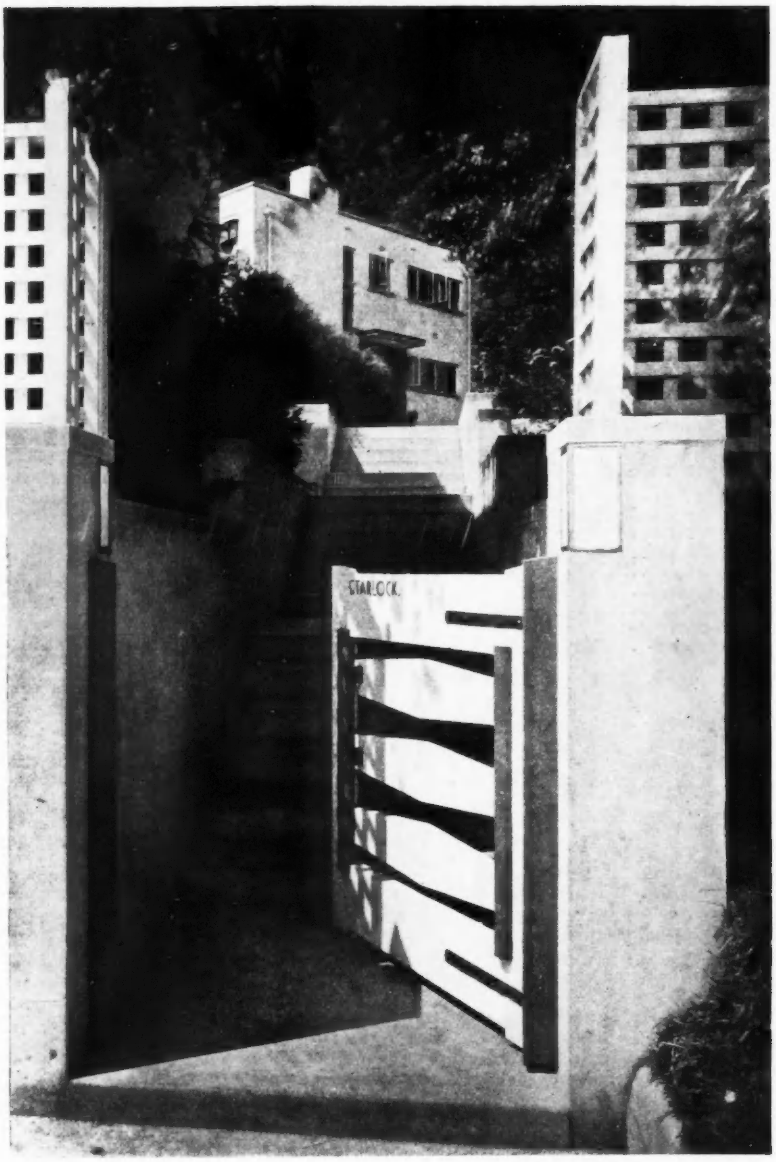
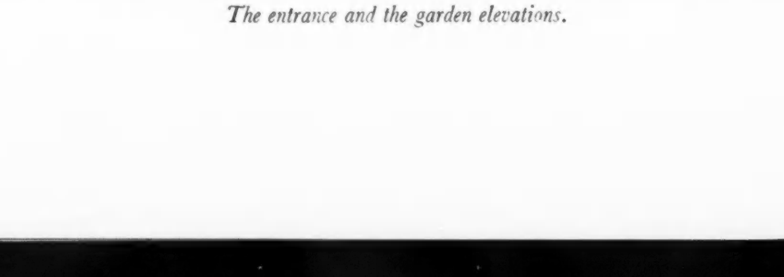
* Over 2 for Glasgow.

A HOUSE AT RYE,

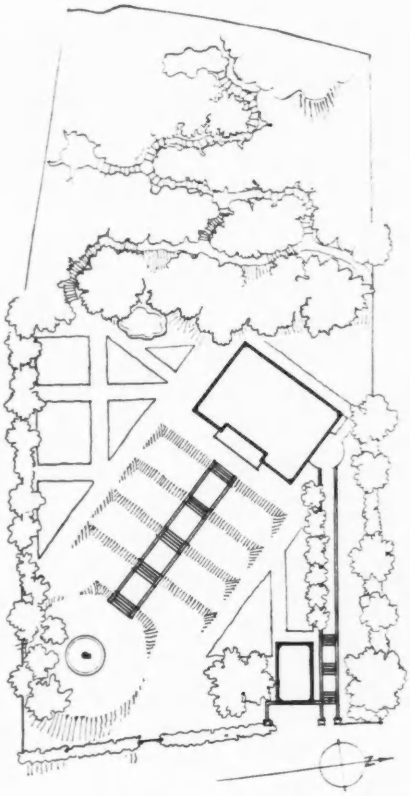


The house from the entrance. The paving, steps and piers are of concrete, the latter having built-in lights on alternate corners. The gate is of wood, painted blue and white.

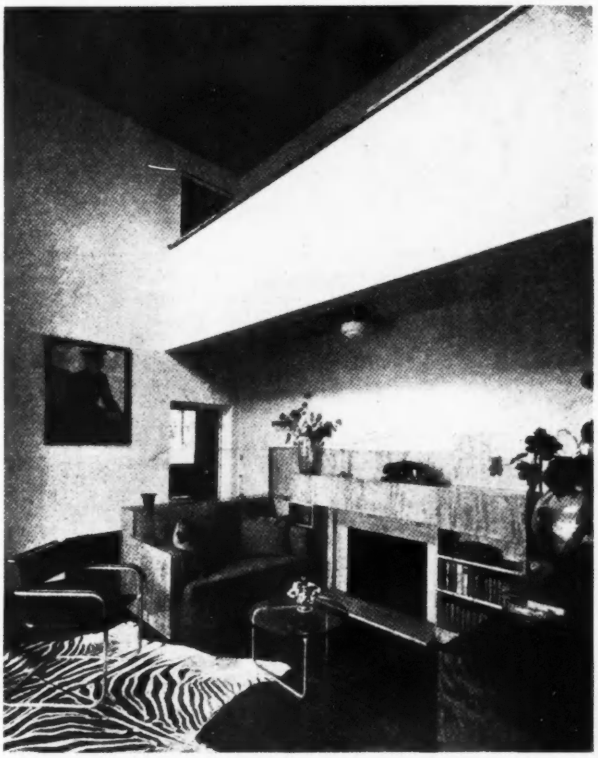


The entrance and the garden elevations.

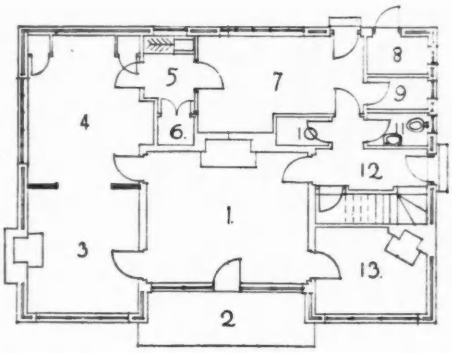
SUSSEX : BY FRANK SCARLETT



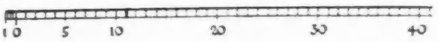
SITE PLAN

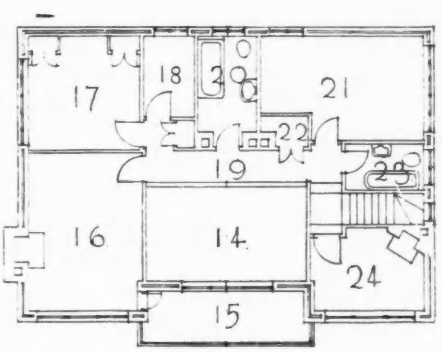


The hall, which is carried up the whole height of the house ; and the balcony above giving access to the bedrooms.



GROUND FLOOR PLAN





FIRST FLOOR PLAN

KEY TO THE ACCOMMODATION

1 : hall ; 2 : loggia ; 3 : drawing room ; 4 : dining room ; 5 : pantry ; 6 : china ; 7 : kitchen ; 8 : coal ; 9 : larder ; 10 : boiler room ; 11 : lavatory ; 12 : entrance vestibule ; 13 : study ; 14 : upper part of hall ; 15 : balcony ; 16 : bedroom No. 1 ; 17 : bedroom No. 2 ; 18 : dressing room ; 19 : gallery ; 20 : bathroom No. 1 ; 21 : guest room ; 22 : linen cupboard ; 23 : bathroom No. 2 ; 24 : maid's room.

The house is constructed in 11 ins. hollow walls of stock brick, with reinforced concrete lintels and balconies, rendered a creamy white. The metalwork of the balcony and the sun blinds are painted blue.

The garage (beside the entrance, see site plan) has a studio above which is entered from the garden level. The fountain in the garden is of stainless steel, and is fed by a natural spring from the cliff above, which also provides all the water for the house. The architect was assisted in the decoration of the interior by Miss Marjorie Templer, the owner.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may in the course of time indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems.—Crown Copyright Reserved.

Treatment of Damp Walls of an Old House

¶ *ARCHITECTS engaged in the renovation of an old house found that they had to contend with serious penetration of damp, which was spoiling decorations and causing a prolific growth of dry-rot fungus. Moisture seemed to be rising from the ground through a leaky damp-proof course and rain was penetrating the walls at various places, particularly at and above first floor level. In the upper floors even internal walls were damp to some extent. In these circumstances, the Building Research Station was asked whether there was any alternative to the costly procedure of inserting a new damp-proof course, and whether an internal rendering of waterproofed cement would be sufficient to keep out the rain. The architects were anxious to avoid any drastic alteration in the appearance of the building.*

No satisfactory method of preventing the rise of moisture from the ground is known, except that of inserting a damp-proof course in the wall and thus breaking the capillary paths along which the water moves. The damp course may be introduced in one or other of the generally recognized ways.

There is some doubt as to the desirability of using an internal treatment to prevent the penetration of rain through the external wall of a building, although cases are known in which such treatment has been applied with success. It is rather unusual to find damp conditions on internal walls, but moisture does sometimes find its way along them from the junction with a damp external wall and may, indeed, travel for considerable distances in this manner.

An internal waterproof skin must be continuous if it is to be truly effective. This entails many difficulties where joist ends have to be housed in the damp wall, and, moreover, wherever internal walls remain in contact with the external wall, moisture is likely to creep along them. The best waterproof rendering that could be applied would not be completely impermeable and there would always be a danger that skirtings and other timbers in contact with the wall would become damp. It must also be realized that the body of the internally waterproofed wall will be damp and that, as heat losses through damp masonry are much greater than through the same wall when dry, it will be cold in winter and condensed moisture will be readily deposited on the relatively impervious inner surface.

For these reasons an external waterproofing treatment is to be preferred. If the appearance of the work is to remain unaltered, it will be necessary to use a colourless waterproofer. Treatments of this kind require to be renewed periodically ; certain of them which have been tested at the Building Research Station have given quite good results for a period of one or two years.

Knocking up "Compo" Mortar

¶ *AN architect asked for information as to the period of time during which a "compo" mortar, containing lime and Portland cement, may be knocked up without danger of destroying the hydraulic properties of the cement.*

As the result of a limited series of tests it is concluded that the set of the Portland cement is not retarded by the lime addition ; nevertheless, a lime-cement mix may be knocked up for a period of about six hours and will still develop appreciable strength.

It seems that the strength of mixes of this kind falls off uniformly according to the time of working. It may be taken as a rough guide that knocking up for 6 hours will result in a loss of half the strength which a normal, rapidly placed mix might develop in seven days, and about one-third of the strength at a month. The proportional loss of strength does not seem to be so great when a hydraulic lime is used as with a non-hydraulic lime. If, therefore, the operatives are to be allowed to prepare a large batch of mortar and use it throughout a working day, the amount of cement in the mix must be adjusted to give a mortar initially half as strong again as the minimum strength considered desirable for the work. On no account, however, should any of the mix be left over till the next day if any appreciable strength is required.

It must be borne in mind that the loss in strength is closely related to the rate of set of the particular cement used. If a batch of cement has a more rapid set than usual (and by this a rapid-hardening cement is not meant), or if the set is accelerated by hot weather, prolonged knocking up may result in even greater loss of strength than is suggested above.

Deterioration of a Concrete Floor in a Bacon Factory

¶ *AN architect's attention was drawn to the deterioration of a concrete floor in a bacon factory. Water had penetrated through the floor to the steelwork and set up corrosion. The damage was greatest in the vicinity of*

OUR SECRETARIES

• 13 •

IVOR P. JONES

SOUTH WALES INSTITUTE OF ARCHITECTS

MR. IVOR P. JONES, A.R.I.B.A., is the eldest son of the late Mr. J. P. Jones, architect, of Cardiff. He was educated at Mill Hill School, being articled to his father's firm, Messrs. J. P. Jones, Richards and Budgen.

He commenced practice some thirty-five years ago, and is now the senior member of the firm of Ivor Jones and Percy Thomas. The firm has been responsible for the erection of numerous buildings in the vicinity of Cardiff and has also been successful in several competitions, one of the most recent being the civic centre for Swansea, won in 1930.

Mr. Jones has occupied the position of Hon. Secretary of the South Wales Institute of Architects for the past twelve years, having been president during the years 1919-1921. He presided at the third Annual Secretaries' Conference at Birmingham last March, and has been elected Chairman for the 1934 meeting of the same Conference.

washing tanks where the water contained salts from brine-cured bacon. The architect wished to know whether the brine would be harmful to the concrete itself.

Without first-hand knowledge of the structure it is impossible to offer a definite opinion. Although a weak brine would not be anticipated to have any marked deleterious action on concrete, it is just possible that the action of a strong brine on a floor that is alternately wet and dry might cause some disintegration. This view is based on the assumption that the brine consists essentially of sodium chloride or nitrate, and that other salts are not present in appreciable amounts. But it is quite natural to expect corrosion where the brine has access to reinforcing steelwork through pores or cracks and this may, of course, lead in turn to further cracking and spalling of the concrete and to rapid deterioration.

The inquirer subsequently informed the Station that he had little doubt that the trouble was brought about by the porous nature of the concrete, and by the formation of shrinkage cracks through which water had obtained ready access to the reinforcement.

It is evident that in industrial premises even very mildly corrosive agents must be prevented from coming into contact with concrete reinforcement or structural steelwork.

SCHOOL NEWS

BRIXTON SCHOOL OF BUILDING

The evening departments of the L.C.C. School of Building, Ferndale Road, Brixton, S.W., the new session of which commences on September 25, provide organized courses of training and individual classes for the purpose of instruction in the work of the building industry and of allied vocations and professions.

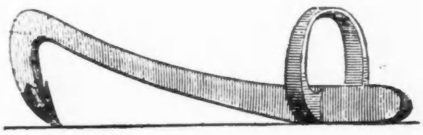
Although the courses of study and the scope of the instruction have been arranged primarily with a view to fitting the student for the practical duties of the various branches of the building industry, special consideration is given to the requirements of the recognized examinations held by independent bodies.

The principal of the School is Mr. F. E. Drury, M.I.STRUCT.E., M.SC.TECH., and the Secretary is Mr. H. N. Hawley, from whom full particulars are obtainable.

BOROUGH POLYTECHNIC

The new session of the Borough Polytechnic, Borough Road, S.E., commences on September 25. The Building Trades Department, of which Mr. D. D. Stockley, B.SC.ENG. (LONDON) is the head, provides the following curriculum :—Brickwork, carpentry and joinery, plumbers' work, practical geometry, technical drawing, building construction, builders' quantities, land surveying, levelling, and building science. There is also a Building Students' Society. This was formed some three years ago in order to afford students facilities for visiting factories and works in progress, to arrange lectures and generally to enable students to obtain a more comprehensive knowledge of the building trade generally than is provided by attendance at classes alone.

Full particulars are obtainable from the principal, Mr. J. W. Bispham, O.B.E., M.A.



TRADE NOTES

[*BY F. R. S. YORKE, A.R.I.B.A.*]

Vibration Tampers

CONCRETE is a mixture of stones or chippings of different sizes, bound together by a matrix of sand, cement and water ; and in order to ensure the proper mixing of the several elements, it is necessary to employ a greater amount of water than enters into combination with the cement.

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This excess water is a constant source of trouble. Under the influence of frost, free water in the concrete will expand and cause disintegration. On the other hand, if the atmosphere in which the concrete is placed is favourable to rapid drying-out, the evaporating water will leave tiny voids, which weaken the material.

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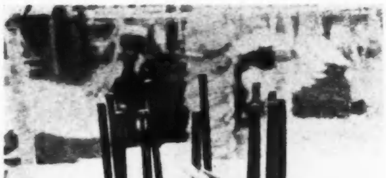
A great deal depends on the tamping, and since this is usually done by hand it is not often consistent throughout the work. We cannot calculate with precision the properties of a material that depends at a vital stage of production so largely on the human element.

•

In pre-cast concrete work the application of vibration has been found to produce a concrete of the required consistency, but vibration applied to *in situ* work, has, I believe, been limited, in this country, to vibrating the shuttering by hammering it externally.



Shuttering and vibrator used in the construction of a reinforced concrete column.

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Portable electric vibrators, similar in some respects to the road breaker's pneumatic drill, but shorter and thicker, that are dropped into the concrete as soon as it is poured, are now being used on the Continent. The concrete should have a constant density when these are used, since they do not rise until the excess water has itself risen to the surface, from which it can be removed easily.

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It seems, given sufficient space between the shutter boards and reinforcement rods, these vibrators should prove extraordinarily useful, especially if, as is claimed, the cement skin that usually forms against the shutter boards is eliminated when the excess water rises to the surface : but the vibrator has considerable girth, as can be seen from the illustration, and I imagine there must be very many instances of its impracticability owing to the narrow spaces between formboards and the congestion of reinforcement.

Swimming Pool Filtration Plant

I have been asked by a reader for information on the purification of water in open-air swimming baths, so I propose describing here the purification plant at the new Hastings Swimming Baths, which is, I am told, designed to circulate and filter the entire contents of the pool—865,000 gallons of sea water—in 7½ hours.

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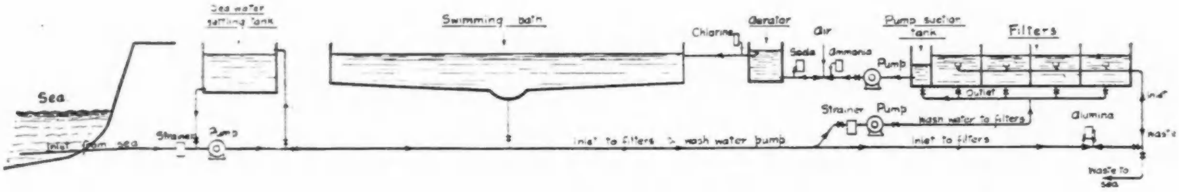
Sea water always contains a quantity of solid matter, held in suspension by the turbulent motion of the sea, but this is precipitated when the water becomes relatively quiescent. At Hastings water is drawn from the sea by a centrifugal pump and delivered into a settling tank, where the greater proportion of the solid in suspension is precipitated.

•

This tank holds 24,000 gallons and must be filled 36 times in order to change completely the water in the bath. It is fitted with mechanism for discharging the precipitated solids to the sea. A pump draws the clear water from the tank and passes it through filters and a second pump discharges it into the bath. The bath has only to be filled once a year since the same water is used throughout the season, with a small amount added



Diagrammatic section through the water circulating and purification plant at the new swimming bath, Hastings.

from time to time to make up the loss due to evaporation and filter washing.

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The water is drawn off from the bottom of the diving pit, the deepest point in the pool, and conveyed by pipes to the filter house below the sun-bathing promenade. Here it is treated with sulphate of alumina and soda to coagulate the organic impurities and colouring matter. A venturi controlled reagent proportioning apparatus continuously administers the coagulants in the form of a concentrated solution. The apparatus is fitted with reagent and water flow indicators which enable the proportions to be adjusted with accuracy.

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The treated water is delivered to three gravity type rapid filters, each 20 by 10 feet, constructed in reinforced concrete. It is distributed along the length of the filter by means of a trough, and flows downwards through a bed of graded sand and pebble filtering media which retains the coagulated impurities. It is then collected from the underside of the filter bed by a patent manifold underdrain system which ensures even operation of the filter over the whole of its area.

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Water from the three filters is delivered by a common main to a control chamber, where the flow is regulated. From here it is drawn by a low lift pattern centrifugal pump and conveyed to an enclosed type aerator, where it is re-oxygenated by contact with air introduced by a water air injector, and sterilized by the addition of chloramine, a process that maintains the entire contents of the pool free from pathogenic organisms. It is then carried in pipes to the shallow end, where it is distributed across the width of the pool through a number of relatively small inlets.

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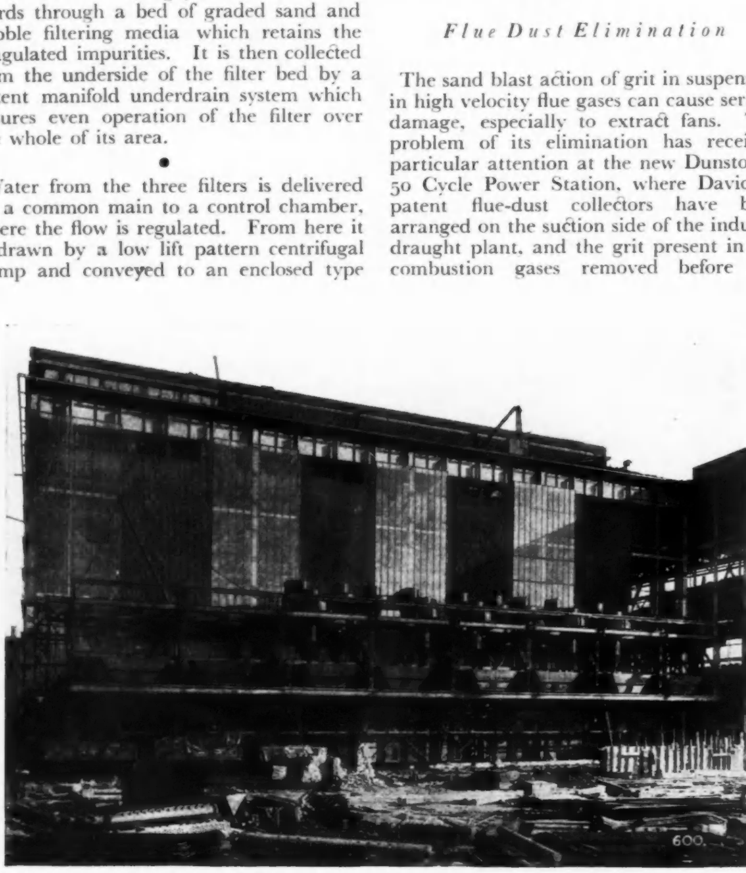
The entire system is designed to resist the corrosive action of sea water, and it is for this reason that the gravity filters are constructed in reinforced concrete. It was installed by the Paterson Engineering Company. The Hastings bath is, I believe, the largest in Great Britain to employ gravity type filters for the purification of swimming bath water, and in no other open-air sea-water bath in this country can the contents be circulated and filtered in so short a time as 7½ hours.

Flue Dust Elimination

The sand blast action of grit in suspension in high velocity flue gases can cause serious damage, especially to extract fans. The problem of its elimination has received particular attention at the new Dunston B 50 Cycle Power Station, where Davidson patent flue-dust collectors have been arranged on the suction side of the induced draught plant, and the grit present in the combustion gases removed before the gases come into contact with the fans. Erosion of the latter is thus prevented.



Davidson patent flue dust collectors in course of erection.

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Three collectors, in parallel, are provided for each of twenty-four Sirocco induced draught fans, and by this parallel arrangement maximum efficiency of dust extraction is maintained under all conditions of station operation. The principle of extraction is the employment of a horizontal casing, of volute shape, through which the combustion gases pass, and where the dust particles are continually urged outwards by centrifugal force and downwards by gravity.

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There are neither water sprays, moving parts, nor high tension electricity supply, which, from the point of view of simplicity and low cost of maintenance, appears advantageous. It is interesting to note that at only one other station in the world, namely, Ironbridge, Salop, are the flue-dust collectors arranged in this manner.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issues :—

Bank of England (pages 344, 351-354). General contractor, Holloway Bros., Ltd., Clerk of works, H. Tanner ; assistant clerk of works, F. Comport ; manager of works, R. Pillar ; Sub-contractors : Rosser and Russell, heating and ventilating ; Drake and Gorham, Ltd., electrical work ; Henry Hope and Sons, Ltd., bronze windows and lanterns ; Val de Travers Asphalte Paving Co., Ltd., asphalt ; Hollis Bros. and Co., wood block floors ; Nine Elms Stone Masonry Works, stonework ; Joseph Armitage, plaster modelling and stone carving ; Waygood-Otis, Ltd., Smith Major and Stevens, lifts ; Carter & Co., Ltd., W. B. Simpson and Sons, Ltd., terrazzo and wall tiling ; Morris-Singer Co., Milner's Safe Co., Ltd., H. H. Martyn & Co., Ltd., Bromsgrove Guild, Ltd., Birmingham Guild, Ltd., bronze doors, balustrades, etc. : Dorman Long & Co., Ltd., Redpath, Brown & Co., Colville Construction Co., Ltd., steelwork ; Adamsez, Ltd., Shanks & Co., Ltd., sanitary fittings ; F. Sage & Co., Ltd., metal fittings ; Fenning & Co., Ltd., marble fireplaces ; London Brick Co. and Forders, Ltd., Eastwood, Ltd., Grovebury Brick Works Co., bricks ; Bath and Portland Stone Firms, Ltd., portland stone ; Hopton Wood Stone Co., Ltd., Hopton wood stone; Expanded Metal Co., Ltd., expanded metal ; London Spray and Brush Painting Co., Ltd., painting ; Cement Marketing Co., Ltd., cement ; Ham River Grit and Sand Co., gravel ; Chubb and Sons Lock and Safe Co., Ltd., Chatwood Safe Co., Ltd., John Tann, Ltd., strong room doors ; Mather and

Platt, Ltd., portcullis doors; Le Grand Sutcliffe and Gell, G. Isler & Co., Ltd., artesian wells; Pilkington Bros., Ltd., glass; Luxfer Co., Ltd., pavement lights; James Gibbons, Ltd., Chas. Smith & Co., Ltd., door furniture; May Acoustics, Ltd., acoustic plaster; Beaven and Sons, Ltd., plumbing, drainage, cold water supplies.

Hastings Swimming Bath (pages 355-357). Sub-contractors: Cement Marketing Co., Ltd., Snowcrete and coloured cement; Flextol Engineering Co., Ltd., machine for polishing white concrete; Masonite, Ltd., Prestwood for lining shuttering; Whitehead Iron and Steel Co., Ltd., reinforcement; Paterson Engineering Co., Ltd., filtration plant.

Showroom for Chance Bros. & Co., Ltd. (p. 360). Sub-contractors: Venesta, Ltd., floors and show tables; flooring laid by the Great Metropolitan Flooring Co.; James Gibbons, Ltd., door furniture; G. A. Harvey & Co., radiator; Mander Bros., paintwork; John Lewis & Co., Ltd., furniture (designed by Gordon Stark), carpets; Troughton and Young, light fittings; Ferranti, Ltd., electric radiator; Morton Sundour, curtains.

We regret that the name of the Kleine Co., Ltd., was inadvertently omitted from the list of contractors for the Civic Hall, Leed, illustrated in our issue for September 7 last.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

The Surrey Education Committee has approved plans for the erection of another two elementary schools on the St. Helier estate, CARSHALTON, at an estimated cost of £61,000.

Messrs. Done Hunter & Co. are to erect a further 56 houses to complete the development of the Rushgrove Avenue estate, HENDON.

The HENDON Education Committee has received sanction to borrow £8,740 for the erection of Sunningfields Road Infants' school, and £350 for the provision of furniture and fittings.

Mr. G. Nicholls of The Broadway, Stanmore, is to erect 44 houses in Pears Road, ISLEWORTH.

Plans passed by the MALDEN AND COOMBE U.D.C.: — Rebuilding shop premises, 21 Malden Road, for Mr. J. Field; public-house, Kingston Vale, for Messrs. W. H. Gaze and Sons; 23 houses, Cambridge Road, for Messrs. Clifford and Clifford; 29 houses, off Cambridge Road, for Mr. A. J. Styles; two houses, Cromwell Avenue, for Mr. F. E. Wells; two houses, High Down and 18 elsewhere for Messrs. Lavender and Farrell; four houses, Coombe Lane, for Messrs. Annesley Brownrigg and Hiscock; three houses, Avondale Avenue, for Messrs. E. H. Wale, Ltd.; six houses, Mayfair Avenue, for Messrs. H. Boot and Sons; 15 houses, off Dickerage Road; 12 shops, Coombe Hill Estate, and 25 houses, Orms Road, for Messrs. G. T. Crouch, Ltd.; development, Mid Coombe Estate, for Cannon Hill Estates, Ltd.

The SOUTHGATE U.D.C. reports that the proposed new housing scheme has been suspended, as the Minister of Health will not sanction houses of the parlour type. Negotiations, however, are being carried on for the acquisition of seven acres of land in Telford Road, for the purpose of a new scheme, and as the covenants of this land would apparently prohibit non-parlour houses, it awaits the decision of the Minister, who will be in the position of either allowing the Council to put up, on the only land available, houses of the only type which can be erected on such land, or of preventing any extension of Southgate's housing activities.

The SURREY C.C. has obtained sanction to borrow £86,280 for the river Wey improvement.

The WALTHAMSTOW Corporation has obtained sanction for a loan of £10,000 for the layout of Low Hall Farm as a sports ground.

The WALTHAMSTOW Corporation has obtained sanction for a loan of £64,750 for electricity showrooms, and is to obtain tenders for the erection of the premises on the Church Hill site.

Plans passed at the WEALDSTONE U.D.C.: Two houses and two flats, Wellington Road, for Messrs. W. J. Shirley & Co.; 16 houses (amended plan), Carmelite Road, for Messrs. Lambert and Cooke; four houses, Westfield Drive, for Fairfields Builders, Ltd.; layout, Farrers Road, for Messrs. John Farrer and Sons.

SOUTHERN COUNTIES

Plans passed by the OXFORD Corporation: Additions, Hunsdon House school, Manor Road, Headington, for Miss K. S. Woods; shops, 107 to 111 Hollow Way, Cowley, for Mr. P. West; two shops, Brasenose Lane, Cowley, for Isis Properties Investment Trust, Ltd.; new ward, Radcliffe Infirmary, for governors; club additions, Blackfriars Road, for Balliol Boys' Committee; sports pavilion, Banbury Road, for Oxford University Press; two houses, Five Mile Drive, for Messrs. Hinkins and Frewin, Ltd.; shop and house, Eden Drive, for Mr. J. R. Dale; additions, workshop and milk store, Cowley Road, for Mr. R. W. Saunders; shop, 30 St. Clement's Street, for Hall's Oxford Brewery, Ltd.; development, Summerton Farm estate, for Urban Housing Co., Ltd.; four houses, Bowness Avenue, for Great Headley Homesteads, Ltd.; four houses, Bowness Avenue, for Mr. A. C. Carter; laboratory and toilet block, Garsington Road, for Pressed Steel Co. of Great Britain, Ltd.; three houses, Banbury Road, for Mr. R. P. Capel; block of offices, Garsington Road, for Morris Motors, Ltd.

Plans passed by the PORTSMOUTH Corporation: Shops and flats, Meredith Road, for Mr. G. A. Day; rebuilding shop premises, 47 and 49 Kingston Road, for Messrs. Whittle Bros.; three houses, Mulberry Avenue, for Mr. C. Hibberd; alterations, 1 Clifton Terrace, for R. N. and R. M. Maternity Home; shop, Chatsworth Avenue, for Portsea Island Mutual Co-operative Society, Ltd.; two houses, Hawthorn Crescent, for Messrs. G. and W. Mitchell; 16 houses, Southwood Road, Hilsea, for Mr. R. J. Winnicott; additions to offices, 451 Commercial Road, for Messrs. Bailey and White, Ltd.; conversion of house into shop, Haslemere, London Road, North End, for Messrs. West and Son; nine houses, Kirby Road, for Mr. J. McDermott; two houses, Queens Grove, for Mr. F. Chandler; eight houses, Villiers Road, for Mr. P. Freer; additions, Lloyds Bank, Ltd., Albert Road, for the Directors; two houses, Laburnum Avenue, Drayton, for Messrs. Williamson and Fallows; three houses, Woodpath, for Mr. F. W. Devenish; 49 houses, Hawthorn Crescent, for Messrs. G. and W. Mitchell; additions to school, Mayville, Waverley Road, for Messrs. John Lay & Co.; club house, Dovercourt Road, Cosham, for Messrs. G. and W. Mitchell; alterations, 76 Albert Road, for the Trustees of St. Simon's Mission Hall; offices, etc., Northern Road, Cosham, for Portsmouth Hardware Co., Ltd.; shop, 34-36 High Street, Cosham, for Messrs. Timothy White, Ltd.; four houses, Havant Road, Cosham, for Mr. E. E. Wilson; seven houses, Albion Street, for Mr. H. M. Gammons; 12 houses, Southwood Road, for Mr. R. J. Winnicott; 12 houses, Hayling Avenue, for Mr. V. Dye; seven houses, Stride Avenue, for Mr. E. Wilson; re-building church hall, Kingston Road, for St. Stephens Parish Council; alterations and additions, 38 High Street, Cosham, for Messrs. H. J. Dewhurst, Ltd.

Plans passed by the SHOREHAM-BY-SEA U.D.C.: 62 houses, Connaught Avenue, for Mr. E. W. Coleman; four houses, The Drive, for Messrs. W. A. Gates and Sons, Ltd.; shops and flats, Lower Road, for Mr. G. Ravenshear; alterations and additions, 35, East Street, for Messrs. E. H. Curd and Son.

MIDLAND COUNTIES

Plans passed at the KENILWORTH U.D.C.: Two houses, Albion Street, for Mr. Pettifier; 12 houses, Windy Arbour, for Mr. Bailey; two houses, Birches Lane, for Mr. Franks; 24 houses, Arthur Street, for Mr. Barber.

Plans passed by the NORTHAMPTON Corporation: Four houses, Stanhope Road, for Mr. F. Berry; development, Pinelands estate, for Messrs. H. Martin, Ltd.; 18 houses, Headlands estate, for Mr. J. E. Lucas; six houses, Pinewood Road, for Mr. A. Atkins; seven houses, Park Avenue, for Messrs. A. P. Hawtin and Sons, Ltd.; four houses, Spinney Road, for Messrs. T. Wilson and Sons, Ltd.; reconstruction Britannia Inn, Barrack Road, for Messrs. P. Phipps & Co., Ltd.; eight bedrooms and alterations, General Hospital, Billing Road, for governors.

NORTHERN COUNTIES

Plans passed at the BINGLEY U.D.C.: Two houses, Gawthorpe Hall estate, for Mr. Frank Scott; shop, York Street, for Mr. Kettlewell; lay-out of land, Primrose Hill, for Messrs. J. W. and F. Derrick; two houses, Grange Park Estate, for Messrs. J. and W. Potter; 18 houses, Harden Road, for Mr. Chas. Houlden; four houses, Laurel Grove, for Mr. J. Dawson; lay-out for 96 houses, Gawthorpe Hall estate, for Mr. Frank Scott.

Plans passed by the BLACKBURN Corporation: Two houses, Burnley Road, for Messrs. Russell Bros.; store room, Bank Top, for Messrs. Thos. Bolton; alterations, 29 King William Street, for Prices Tailors, Ltd.; two houses, Queen's Road, for Mr. L. Charnley; two houses, off Brownhill Road, for Mr. James Newton; four houses, Lammack Road, for Messrs. Frankland Bros.; four houses, Buncer Lane, for Mr. T. Hairsnape; three houses, Shorrock Lane, for Mr. G. H. Felton.

Plans passed by the BOLTON Corporation: Two houses, Crompton Way, for Mr. W. E. Yates; 22 houses, Florence Avenue, for Messrs. Haddock and Bowling; workshop and office, Rose Hill, for Messrs. John Crook, Ltd.; four houses, Moss Lane, for Mr. A. S. Woods; 10 houses, Walker Avenue, for Mr. J. G. Holland; pavilion, Regent Road, for Lostock Park Tennis Club; conversion of house into two houses, Spinners' Arms, Mill Hill Street, for Mr. John Hawkins; conversion of house into two houses, Greengate Inn, Hammond Street, for Mr. John Tunnah; mission hall, Tattersall Avenue, for St. Peter's Parochial Church Council; sports arena, Manchester Road, for Mr. C. Sutton; lay-out of land, etc., off St. Helens Road, for Sir William Hulton; 10 houses, Millstone Road, for Messrs. S. Main & Co.; four houses, Smithills Croft Road, for Mr. S. J. Powell; four houses, Forest Road, for Mr. William A. Whittle.

Plans passed by the ECCLES Corporation: 56 houses, Wilfred Road, etc., for Messrs. Ogden and Partington; extension of Cavendish Road and two new roads, for Bridgewater Estates, Ltd.; addition to shop, 13 Parrin Lane, for Mr. E. Lichtenstein; storeroom and workshop, rear 39 Liverpool Road, for Mr. W. Channing.

Plans passed by the HYDE Corporation: Extensions, Rexine Works, Muslin Street, for Imperial Chemical Industries (Rexine), Ltd.; 10 houses, Croft Street, for Messrs. Dean and Whipp; 10 houses, Vale Avenue, Godley, for Messrs. J. Bramall and Sons, Ltd.; two houses, Baron Street, for Mr. B. Armitage; shop extensions, 274 Mottram Road, for Mr. A. Ashbrook.

Plans passed by the WALLASEY Corporation: Eight houses, Meadowbrook Road, for Mr. Thomas Rule; eight houses, Breck Road, for Mr. R. H. McGeoch.

THE WALLASEY Corporation Libraries Committee has voted £9,500 for the provision of libraries in Wallasey village, New Brighton and Moreton; £3,000 to be spent in the year 1934/35, and £6,500 in the year 1935/3.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	BANBURY	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5	1 0¾
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A	Cumberland	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	HALIFAX	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	JARROW	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	LANCASTER	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W. Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	PAISLEY	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	TAMWORTH	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1 1¼
A	Tyne District	N. E. Coast	1 5½	1 1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	YARMOUTH	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	,,		7	6
Building Sand	,,		7	9
Washed Sand	,,		8	9
2" Broken Brick	,,		8	3
¾" ,, ,,	,,		11	6
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	9	2	6
,, Wirecuts	,,	8	2	6
,, Brindles	,,	7	6	6
,, Bullnose	,,	9	14	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	8	8	0
Luton Facings	,,	8	0	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

			s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		19	0
,, ⅞"	,,	1	1	6
,, 1"	,,	1	3	6
,, 1¼"	,,	1	7	6
,, 1½"	,,	1	12	0
Deal matchings ⅝"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1½"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ⅜"	,,	8	6
,, ,, ½"	,,	8	3
,, ,, ⅝"	,,	8	0
,, ,, ¾"	,,	7	6
,, ,, ⅞"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	,,	5	0	8	6
Boots	,,	3	3	4	5
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	1	0
,, drawn pipes	,,		18	0
,, soil pipe	,,	1	5	0
,, scrap	,,		13	6
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			10½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	0	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2½
,, ,, 26 oz. ,, ,, ,,	,,					3½
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
¼" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

			£	s.	d.
Digging over surface n/e 12" deep and cart away		Y.S.		2	9
,, to reduce levels n/e 5' 0" deep and cart away		Y.C.		8	6
,, to form basement n/e 5' 0" deep and cart away		,,		9	0
,, ,, 10' 0" deep and cart away		,,		9	6
,, ,, 15' 0" deep and cart away		,,		10	0
If in stiff clay	add	,,		2	6
If in underpinning	,,	,,		4	0
Digging, return, fill and ram	,,	,,		4	0
Planking and strutting to sides of excavation		F.S.		1	0
,, ,, to pier holes		,,			5
,, ,, to trenches		,,			5
,, ,, extra, only if left in		,,			3
Hardcore, filled in and rammed		Y.C.		10	0
Portland cement concrete in foundations (6-1)		,,	1	6	0
,, ,, ,, (4-2-1)		,,	1	12	6
,, ,, underpinning		,,	1	16	0
Finishing surface of concrete, spade face		Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	5	2	3
Extra, only for bends	Each	2	5	3	9
,, junctions		3	9	4	6
Gullies and grating	,,	16	6	18	0
Cast iron drains and laying and jointing	F.R.	4	9	6	0
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
,, ,, in cement	,,	29	15	0
,, Stocks in cement	,,	35	15	0
,, Blues in cement	,,	52	0	0
Extra only for circular on plan	,,	2	0	0
,, backing to masonry	,,	1	10	0
,, raising on old walls	,,	2	0	0
,, underpinning	,,	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	,,			5½
,, ,, ,, red brick facings and pointing	,,			11
,, ,, ,, blue brick facings and pointing	,,		1	4
,, ,, ,, glazed brick facings and pointing	,,		3	6
Tuck pointing	,,			7
Weather pointing in cement	,,			3½
Slate dampcourse	,,			10
Vertical dampcourse	,,		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	,,	6	9
¾" paving or flat	,,	4	0
1" paving or flat	,,	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	,,		2
Rounded angle	,,		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including alll abours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	,,		13	6
Artificial stone and do.	,,		13	0
York stone templates, fixed complete	,,		10	6
,, thresholds	,,		13	6
,, sills	,,	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	,,	3	7	0
Do., 24" × 12"	,,	3	17	0
Westmorland slating, laid with diminished courses	,,	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	,,	3	0	0
Do., all as last, but of machine-made tiles	,,	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	,,	4	6	6
,, ,, ,, ,, ,, ,, (green)	,,	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
,, to stanchions	,,			8
,, to staircases	,,		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	,,		4	6
,, ,, roofs	,,		6	6
,, ,, trusses	,,		7	6
,, ,, partitions	,,		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" ,, ,, ,, ,,	,,	1	17	6
1¼" ,, ,, ,, ,,	,,	2	3	0
¾" × 2" fir battening for Countess slating	,,		9	6
Do. for 4" gauge tiling	,,		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
,, ,, ,, 2 ,,	,,		2	9
,, ,, ,, 3 ,,	,,		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" ,, ,, ,, ,, ,,	,,		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and ongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	,,	2	12	6
1½" do.	,,	2	19	0
1" deal moulded skirting, fixed on, and ncluding grounds plugged to wall	F.S		1	6
1¼" do.	,,		1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" ,, ,,	,,	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	3	9
2" ,, ,, ,,	,,	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" ,, ,, ,,	,,	2	
1½" ,, but moulded both sides	,,	2	4
2" ,, ,, ,,	,,	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" ,, ,,	,,	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	2	6
1½" deal moulded wall strings	,,	2	1
1½" ,, outer strings	,,	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" ,, ,,	,,	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	,,	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	,,		19	6
Do. stanchions with riveted caps and bases and do.	,,		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	,,		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	6
Do. in flashings		1	18	0
Do. in covering to turrets, etc.	,,	2	4	0
Do. in soakers	,,	1	10	0
Labour to welted edge	F.R.			3½
Open copper nailing	,,			3½
Close ,, ,,	,,			4½

		½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1¼" s.	1¼" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks	F.R.	1	0	1	2	1	5	2	1	3	0	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	3
Do. to stop ends	,,		6½		8		9		11	1		—	
Boiler screws and unions	,,	3	3	3	9	5	0	8	0	—		—	
Lead traps	,,	—		—		—		6	3	8	9	—	
Screw down bib valves	,,	6	9	9	6	11	0	—		—		—	
Do. stop cocks	,,	9	0	11	0	14	6	20	6	47	0	—	

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	,,	1	6
Do. outlets	,,	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	,,	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	,,		3	6
Lathing with sawn laths to ceilings	,,		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	,,		1	9
Do. vertical	,,		2	3
Rough render on walls	,,		1	4
Render, float and set in lime and hair	,,		2	0
Render and set in Sirapite	,,		2	2
Render, backing in cement and sand, and set in Keene's cement	,,		3	1
Extra, only if on lathing	,,			4
Keene's cement, angle and arris	F.R			6
Arris	,,			2
Rounded angle, small	,,			3
Plain cornices in plaster, including dubbing out, per 1" girth	,,			1½
1" granolithic pavings	Y.S.		3	6
1½" ,,	,,		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	,,		17	6
9" × 3" ,, ,, ,, ,,	,,	1	2	6
Extra, only for small quadrant angle	F.R.			8

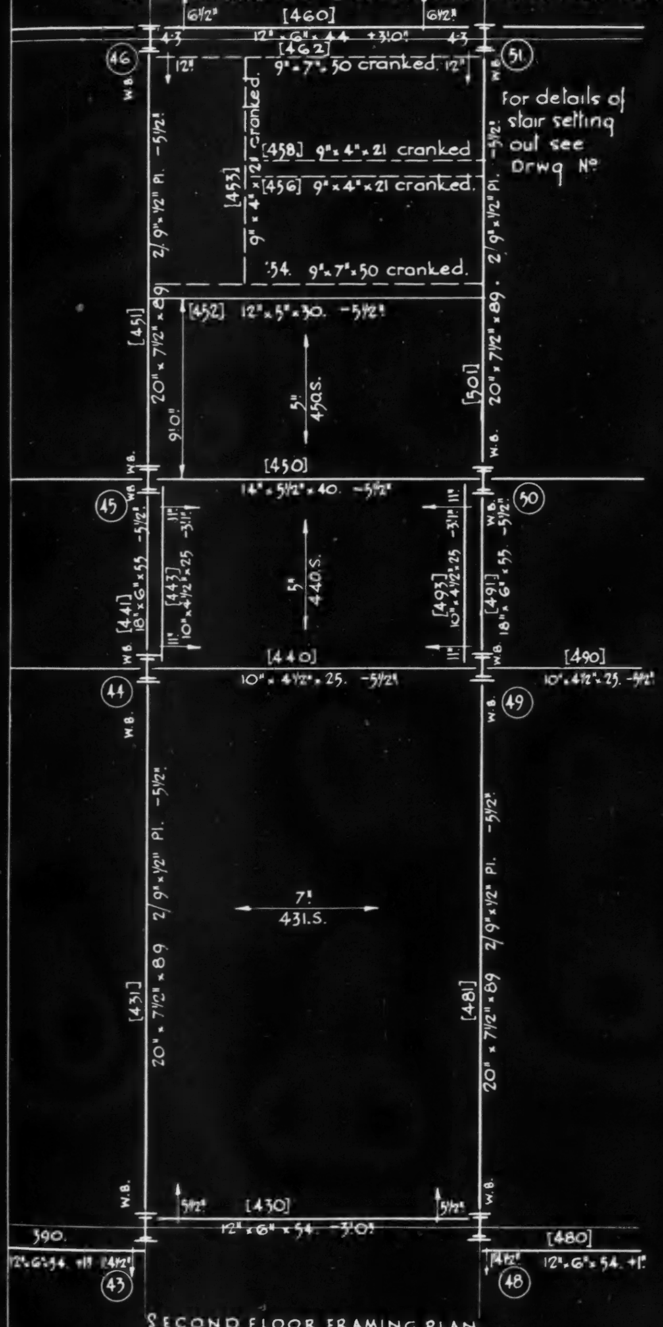
GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	,,		8½
Arctic glass and glazing with putty	,,	1	1
Cathedral glass and do.	,,	1	2
Glazing only, British polished plate	,,		7
Extra, only if in beads	,,		2
Washleather	F.R.		4

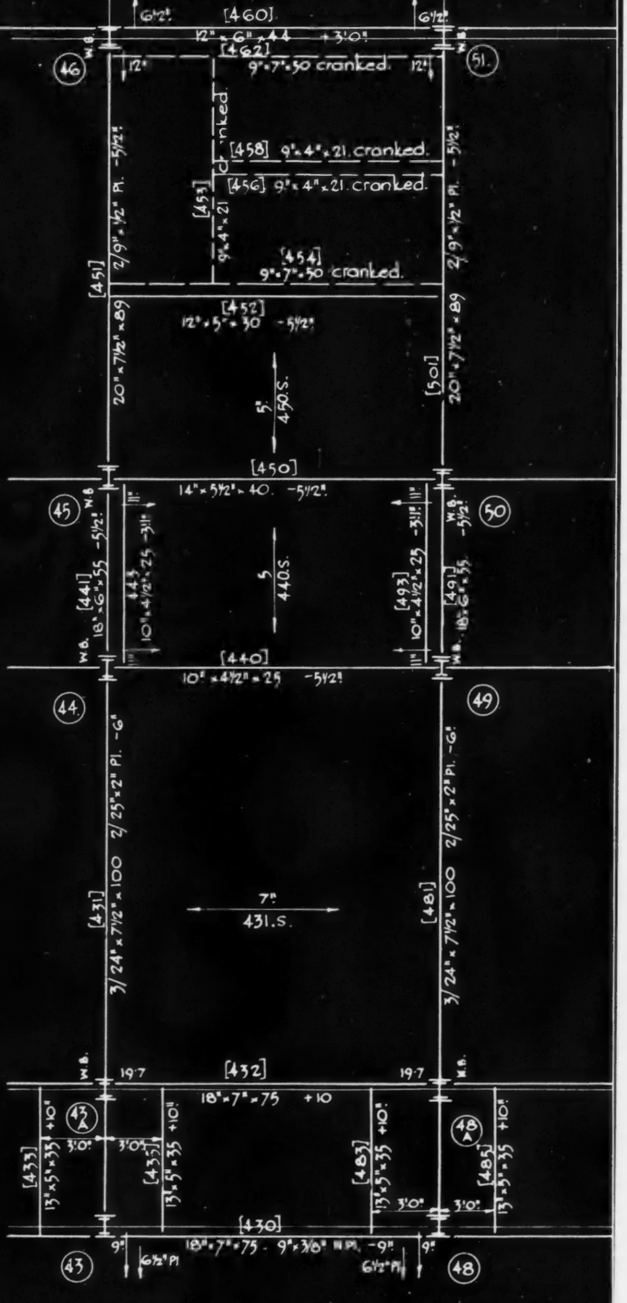
PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	,,		9
Do. with washable distemper	,,	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3	3
Do. on woodwork	,,	3	6
Do. on steelwork	,,	3	0
Do. and brush grain and twice varnish	,,	5	6
Stain and twice varnish woodwork	,,	1	11
Stain and wax-polish woodwork	,,	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . from	,,	2	9

1. Beams : number, size, level, reaction and eccentricity if any, shown thus : I 3·5. [493] 3·5. I 11" 10"×4½"×25 −3'1" 11"
2. Beam numbers : beams take the number of the adjacent column & an additional number, beams running up & down the sheet take an odd figure & beams running across the sheet take an even figure.
Marks : Steel on the Ground Floor framing plan – Mark. G.F. Steel on the Second Fl. framing plan – Mark 2.
Steel on the First Floor framing plan – Mark. 1. Steel on the Third Fl. framing plan – Mark 3.
3. Beam levels : given as the distance above or below (+ or −) the finished floor level, of the topmost face of steel (flange, plate or angle as the case may be).
4. Eccentricity : the distance of the ℄ of beam from the ℄ of the stanchion : direction & amount given thus 11" I
5. Floor slab : thickness of structural floor (including hollow tile if any) and direction of span shown thus : 5" 203 S
6. All beams are I section unless otherwise noted.


[460]
12"×6"×44 +3'0"
6½"
4·3
[462]
9"×7"×50 cranked.
12"
46
51
W.B.
For details of stair setting out see Drwg No
[458] 9"×4"×21 cranked
[456] 9"×4"×21 cranked.
[453] 9"×4"×21 cranked
454 9"×7"×50 cranked.
2/9"×½" Pl. −5½"
[451] 20"×7½"×89
[452] 12"×5"×30. −5½"
5" 450.S.
9'0"
[501] 20"×7½"×89
[450] 14"×5½"×40. −5½"
45
50
[441] 18"×6"×55 −5½"
[443] 10"×4½"×25 −3'1"
11"
5" 440.S.
[493] 10"×4½"×25 −3'1"
[491] 18"×6"×55 −5½"
[440] 10"×4½"×25. −5½"
[490] 10"×4½"×25. −5½"
44
49
7" 431.S.
[431] 20"×7½"×89
[481] 20"×7½"×89
[430] 12"×6"×54. −3'0"
5½"
390.
12"×6"×54. +1" 4½"
[480] 12"×6"×54. +1"
43
48

SECOND FLOOR FRAMING PLAN
i.e. First Floor plan showing steelwork in the floor of the Second Floor.


[460]
12"×6"×44 +3'0"
6½"
[462]
9"×7"×50 cranked.
12"
46
51.
W.B.
[458] 9"×4"×21 cranked.
[456] 9"×4"×21 cranked.
[453] 9"×4"×21 cranked
[454] 9"×7"×50 cranked.
[451] 20"×7½"×89
2/9"×½" Pl. −5½"
[452] 12"×5"×30 −5½"
5" 450.S.
[501] 20"×7½"×89
[450] 14"×5½"×40. −5½"
45
50
[441] 18"×6"×55 −5½"
[443] 10"×4½"×25 −3'1"
11"
5 440.S.
[493] 10"×4½"×25 −3'1"
[491] 18"×6"×55 −5½"
[440] 10"×4½"×25 −5½"
44
49
[431] 3/24"×7½"×100 2/25"×2" Pl. −6"
[481] 3/24"×7½"×100 2/25"×2" Pl. −6"
7" 431.S.
[432] 18"×7"×75 +10
19·7
43A
48A
[433] 13"×5"×35 +10"
[435] 13"×5"×35 +10"
[483] 13"×5"×35 +10"
[485] 13"×5"×35 +10"
3'0"
[430] 18"×7"×75 · 9"×3/8" W.Pl. −9"
9"
6½" Pl
43
48

THIRD FLOOR FRAMING PLAN
i.e. Second Floor plan showing steelwork in the floor of the Third Fl.

NOTE : Floor construction sheets are usually issued separately from the framing plans, with slab number, slab thickness & direction of span shown thus, 7" 431·S. Slabs take the number of their supporting beams (i.e. the left hand or the bottom beam)

INFORMATION SHEET : STEELWORK : STANDARD TYPE FRAMING PLANS
SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1

INFORMATION SHEETS

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STEELWORK : III

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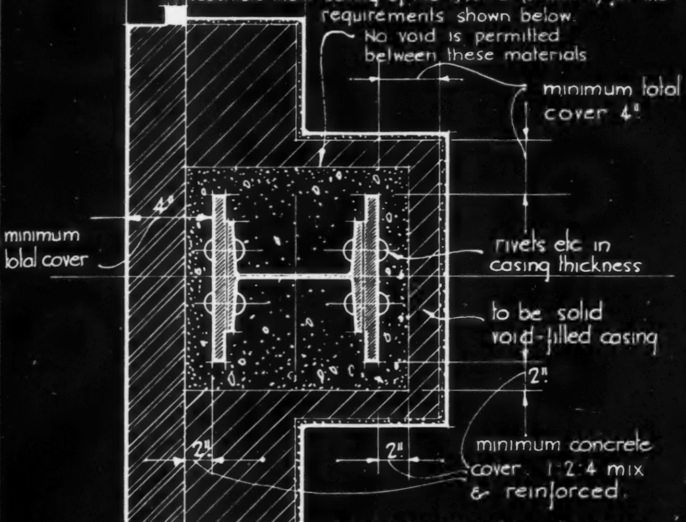
THIS week we publish the third and last of the three Information Sheets devoted to steelwork, and the first of a series of four dealing with the requirements of the L.C.C. Waivers, 1932.

The following is a full list of the subjects previously issued :—

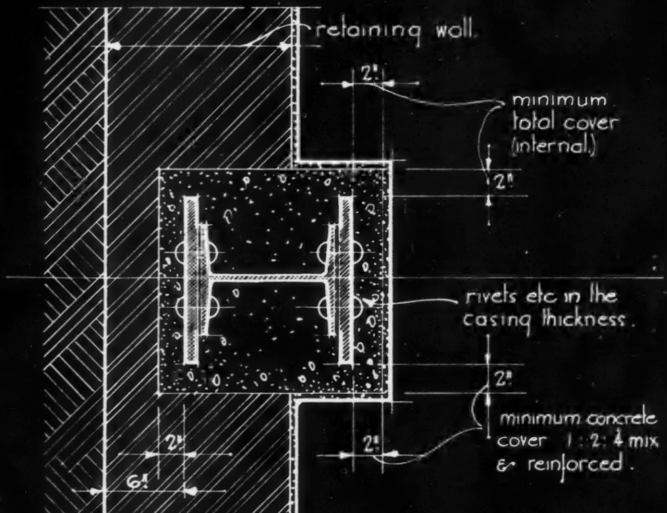
1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units : I.
13. Apr. 12—Lavatory Units : 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs : I.
23. June 29—Concrete Stairs : 2.
24. July 6—Pressed Steel Stairs : I.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs : 2.
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes : I.
30. Aug. 17—Lay-out of Wardrobes : 2.
31. Aug. 24—Common Sizes Miscellaneous.
32. Aug. 24—Electric Lighting : I.
33. Aug. 31—Electric Lighting : II.
34. Aug. 31—Electric Lighting : III.
35. Sept. 7—Electric Lighting : IV.
36. Sept. 7—Vacuum Cleaning Systems.
37. Sept. 14—Steelwork : I.
38. Sept. 14—Steelwork : II.

[Under the 1930 Act, Third Schedule, Section 3. External pillars require a casing of 4" terra cotta, brickwork, concrete, stone, tiles or other incombustible material properly bonded and secured.]

N.B. In general it is permissible only to work under either the 1930 Act or under the 1932 waivers, but not under both (i.e. combinations of them), except that – it is permissible in using the Waivers to substitute the 4" casing of the 1930 Act (as above) for the requirements shown below.


No void is permitted between these materials
minimum total cover 4"
minimum total cover
4"
rivets etc in casing thickness
to be solid void-filled casing
2"
2"
2"
minimum concrete cover 1:2:4 mix & reinforced.

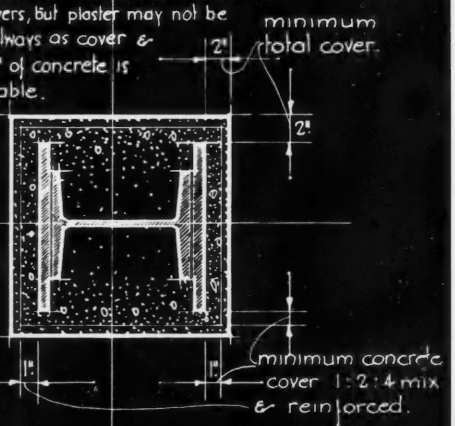
EXTERNAL OR PARTY WALL PILLARS
(not abutting against earth)
COVER AS REQUIRED BY L.C.C. WAIVERS 1932 SUB-SECTION 12A.


retaining wall.
2"
minimum total cover (internal.)
2"
rivets etc in the casing thickness.
2"
minimum concrete cover 1:2:4 mix & reinforced.
2"
2"
6"

EXTERNAL OR PARTY WALL PILLARS.
(abutting against earth.)
COVER AS REQUIRED BY L.C.C. WAIVERS 1932 SUB-SECTION 12A.

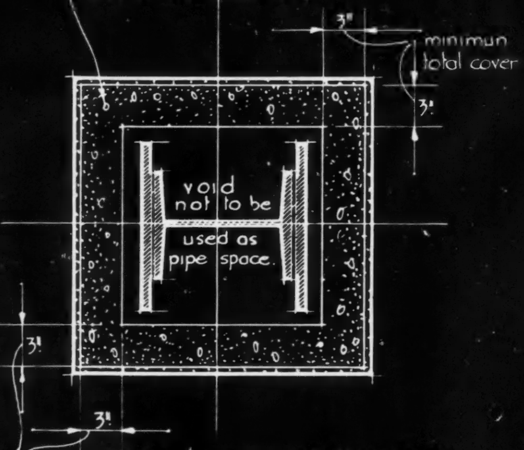
[Under the 1930 Act Third Schedule Section 4. Internal pillars require a casing of 2" terra cotta, brickwork, concrete, metal lathing and plaster or cement. Wood furring is not permitted.]

The cover shown here is in accordance with the Waivers, but plaster may not be accepted always as cover & generally 1" of concrete is impracticable.


2"
minimum total cover.
2"
1"
1"
minimum concrete cover 1:2:4 mix & reinforced.

INTERNAL PILLARS: COVER AS REQUIRED BY L.C.C. WAIVERS 1932 SUB-SECTION 12 B.

No holes nor access panels are permitted in this casing


3"
minimum total cover
3"
void not to be used as pipe space.
3"
3"

minimum concrete cover 1:2:4 mix and reinforced & secured to stanchions.

INTERNAL PILLARS
where the casing is not in contact with the steel.
COVER AS REQUIRED BY L.C.C. WAIVERS 1932 SUB-SECTION 12 B.

N.B. These diagrams illustrate the minimum requirements. In cases of excess cube or other exceptional circumstances the covers shown may be required to be increased.

DIAGRAMS OF REQUIREMENTS OF THE L.C.C. WAIVERS 1932: STRUCTURAL STEELWORK.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

Supplement to THE ARCHITECTS' JOURNAL for September 21, 1933

INFORMATION SHEETS

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L.C.C. WAIVERS : I

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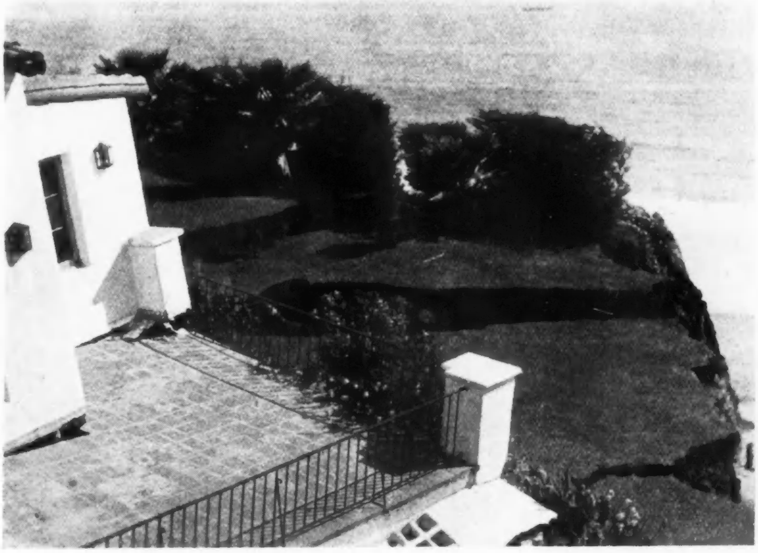
FOR a list of the Information Sheets previously issued, see the other Sheet accompanying this issue.

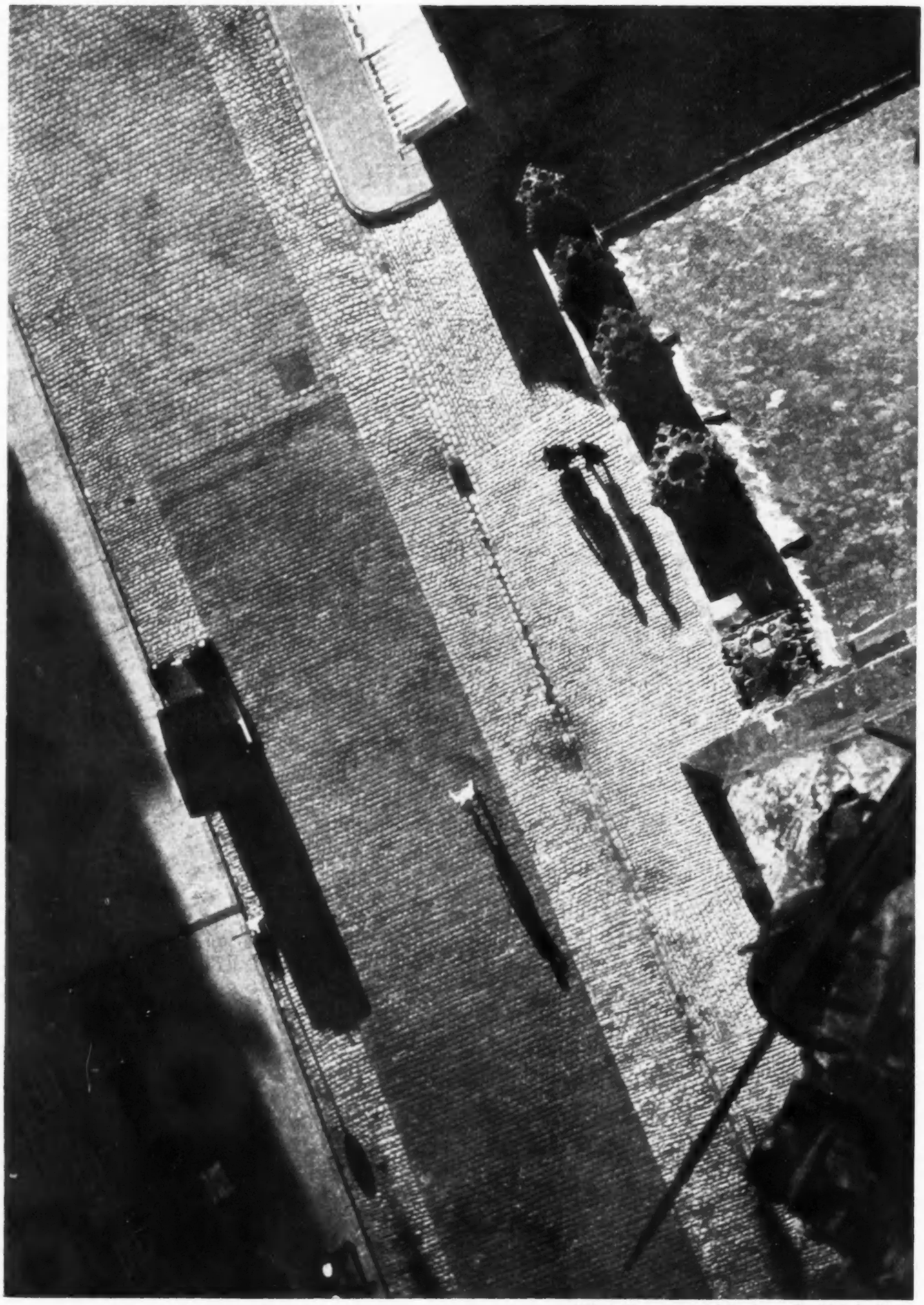
ARCHITECTURE IN THE BALANCE

A CALIFORNIAN EARTHQUAKE



THIS photograph was taken during an earth tremor at San Clemente, Southern California, that followed the recent great earthquake.

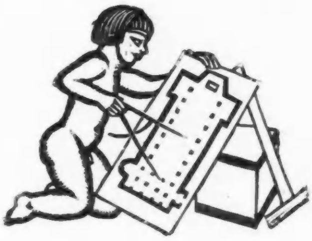
Cracks are opening in the lawn, and the house is in process of settling into a seventy-foot chasm that opened beneath it, and into which it eventually disappeared.



[*Photo by courtesy of Professor L. Moholy-Nagy.*

THE "NEW VISION" REVEALS THE STREET'S SUBCUTANEOUS TEXTURE

Modern photography allows "macroscopic" bird's-eye compositions to be chosen from everyday scenes as arbitrarily as a painter groups his elements for a still-life. Here some half-dozen varieties of street paving arrange themselves in lateral juxtaposition like textile cuttings; each trimmed granite sett and roughly rounded cobble being an integral factor in this expanse of stony warp and weft. Significant formal accents to their repetitive pattern are lent by the elongated shadows that parallel the road's diagonal. The five objects in the right-hand top corner which appear as stylized spruce-trees are the Gothic pinnacles of a courtyard gateway. The only suggestion of human habitation is the strip of unreal-looking windows brought focally into echelon opposite them.



THE FILM INSTITUTE AND ARCHITECTURE

IT is the merest platitude that every epoch sees the physical world with a vision peculiarly its own: a vision that is the very soul and inspiration of its art. One of the commonest causes of failure to appreciate why the æsthetic of modern architecture is necessarily an entirely untraditional one is a corresponding inability to envisage our increasingly "technocratic" civilization with eyes schooled to the mechanistic vision of our age. For all its difference to historical forms modern architecture is not an isolated formal phenomenon. Contemporary painting and sculpture both reflect the same anti-representational point of view. Modern architecture has been brought into being quite as much by a new way of looking at the relations of voids and volumes as by the discovery of new constructional principles and materials. The latter, indeed, are but the tangible by-products of this new and, if only in part, photographically trained outlook.

And just as photography has revolutionized the graphic and plastic arts in less than a century, so too, though less directly, it has been instrumental in that revolution in architectural design which characterized the last decade. The power of this mechanically recording eye to pierce solid bodies, and travel round and through them, has abolished the separable identities of exterior and interior. As a result walls have become transparent screens, and the atmospheric extent of rooms has been optically prolonged into space to include the horizon itself.

The bird's-eye view and the worm's-eye view, to take only two examples, enable the naked human eye to embrace the complete plan-form of an individual building and the planlessness of a whole urban area, either macroscopically or microscopically. But if these simple technical advances in focus and perspective have laid bare often unsuspected planning faults and architectural absurdities, they have also revealed quite as unsuspected æsthetic or structural virtues. As applied to architecture the new vision is not merely a question of whence or how we behold, but of the whence plus how.

This would soon become apparent if we could compare the photograph on the opposite page with two others of the same street, each taken from the same point in plan: the first from ground level at an upward angle corresponding to the downward angle of the view that is reproduced, and the second from the same spot but parallel to the road's diagonal. Some will find insight tantamount to genius (for the possibility of accidental discovery can be dismissed at once) in the selection of "a scene from everyday life" which transcends the fascination of its perfect pattern; others, seeing metaphorically no farther than their noses, only an ordinary empty street snapped from the top of a tower. These extremes of reaction define the gulf separating the new vision from the old, the divergence between photogenetic and pictorial susceptibility.

Today buildings are more often judged by photographic reproductions than *in situ* inspection. We often hear the defence that such and such a church or town hall "looks far better if you actually see it"; a plea which tacitly admits the architect's partial failure to exteriorize his design. Without the aid of expert architectural photography a building cannot be visualized either in its three-dimensional entirety, by juxtaposition of its various elevations, or in respect of its interior to exterior relations. The difference between the soberest of "architects' own drawings" and the "first release" views after unscaffolding taken from the same points of vantage by professional photographers is very much that distinguishing personal romanticism from impersonal realism—which is not to deny that there is room for both in architecture as in life.

Photography and cinematography offer the most effective means of propaganda for the architectural education of the public. They can make the layman see things in a few seconds which no architectural textbook could make him realize in as many hours. To no profession is a proper understanding of the whole creative and revelational scope of modern photography more important than our own. The architect of the near future will neglect it at his peril. In *From Material to Architecture* Professor L. Moholy-Nagy says that within the next generation or so "the man or woman who cannot use a camera will be regarded as an illiterate is today."

The inaugural meeting of the British Film Institute last Thursday is an event that should give keen satisfaction to all architects.

Provided the Institute (which we trust may soon be expanded so as to include all branches of photography) is adequately supported it may be relied upon to perform a work of vital national importance. At present, however, the maximum income it can count on is some £5,000, its estimated share of the entertainments tax collected under the Sunday Performances Act—a drop in a Hollywood ocean indeed. It is to be hoped that the R.I.B.A. will decide to make the Institute a regular annual grant to foster certain specifically educative forms of architectural propaganda, such as regional- and town-planning, rural preservation, the safeguarding of ancient monuments, slum clearance, housing, etc. No money could be better spent in the interests of the profession and the nation at large.

It may seem a far cry from film production to the lay-out of commercial exhibitions. Success in each depends on mastery of a very special and ever-changing technique, combined with unity of control and conscientiously co-ordinated planning. As the British Industries Fair at Castle Bromwich demonstrates bi-annually, our exhibitions are just as wrong, internationally speaking, as our films ; and with even less excuse. If the new vision is essential to the making of good films, it is every bit as much so to a comprehension of what large organized displays should, and should not, be—as that outstanding exception, the B.I.A. show at Dorland Hall, triumphantly proved this summer. The two most important recent exhibitions to receive universal praise were the Berlin Building Exhibition of 1931, and the German *Werkbund's* collective exhibit at last year's Paris *Salon des Artistes-Décorateurs*. Significantly enough the master hands in each were both ex-directors of the famous Dessau *Bauhaus*, Walter Gropius and Moholy-Nagy : one a very eminent, if revolutionary, architect ; the other the most eminent and revolutionary architectural photographer living.

M.Inst.R.A.

THE REGISTRATION COUNCIL'S DECISION

At the time of going to press we received the following statement from the Architects' Registration Council : "At the meeting of the Architects' Registration Council of the United Kingdom held yesterday (September 25), a letter from the President of the recently-formed Institute of Registered Architects asking for co-operation and support was read and considered. The Council resolved that the request be not acceded to on the grounds that the new Institute could not advance the interests of the architect as a Registered person in any matter that is not already the concern of the Council and could only add to the financial charge on the architectural profession without any commensurate advantage."

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Parl.
London

NOTES & TOPICS

THE D.I.A. IN HOLLAND

I RETURNED breathless from Holland, where members of the D.I.A. spent the week-end registering new impressions at high speed. Arriving in Amsterdam after an auspicious crossing, the showrooms of Metz & Co. were appraised through the eyes of the interior decorator.

*

Hilversum is a town of many schools and a Town Hall, the work of Dudok, whose legs hurriedly disappeared at the sight of the party. These are buildings in which the craftsman is relegated, where mass production is admirably displayed. An exception is the excellent stained glass in the Town Hall by Nicolas.

*

One morning was devoted to the housing in Amsterdam and a delightful open-air school for infants. I understand that the housing problem there is similar to our own—there is an insufficiency of accommodation for the lowest paid workers.

*

In Rotterdam the clarity of the Van Nelle factory was much appreciated and recalled to many the gramophone factory in the film *A Nous la Liberte*.

*

The tour ended officially with Dudok as composer, the melody being the Bijenkorf store.

*

ZERO HOUR

The first number of *Zero Hour*, a new publication representing the left wing of the younger architects in South Africa, is printed in such unpleasant, illegible type that only by unusually great effort was I able to read the dozens of pages of matter it contains.

*

This is a pity, for what I commenced as a duty would quickly have become a pleasure had the going been made more easy by a type that did not persist in carrying the eye up and down, instead of across the page.

*

The function of *Zero Hour* is to bring into closer relationship the public consciousness of architecture in its many manifestations, and the achievements of active literary contemporaries in this field.

*

Good luck to the venture ; but, change the type.

*

THE FATE OF BRITISH SCULPTURE

Discussing the enlargement of the sculpture galleries of the Tate Gallery with an artist friend set me wondering on the fate of British sculpture. It is curious that this little renaissance of sculpture in England should be put to such small architectural uses, or rather, more accurately, civic uses.

*

Take, for instance, Frank Dobson, whose sketch for a

Welsh National Memorial I have for long considered to be one of the grandest designs of recent years. To what uses have we applied his genius? His memorial was never carried out, just as few people have ever seen Eric Gill's magnificent female torso in Hopton Wood stone which should be in a prominent public place instead of in a private back garden.

*

It would seem as though large industrialists today are better educated patrons of art than are civic authorities.

*

Look at the bulk of civic statuary—no, don't look at it. Its bulk is not good to look upon. Anyway, this is a hopeless subject. Only a low burning hope within me brings it to the surface at times. And it is that grand thing of Dobson's that irks most.

*

PAINTINGS BY WILLIAM TOWNSEND

I called at the Wertheim Gallery on Monday to see the exhibition of paintings by William Townsend, who, since his first exhibition at the Bloomsbury Gallery, last year, has turned his attention to exploration of the interplay of structural lines and decorative rhythms in the architecture of Canterbury Cathedral.

*

Several experiments in this direction, one of which is reproduced here, are included in the current show.

*

In Canterbury Cathedral, South Transept, there appears an attempt to harmonize three diverse elements, the severe lines and blank surfaces of the Norman transept, the flamboyant tracery of the fourteenth-century windows and the geometric pattern of the lead roof.

*

Mr. Townsend—William—as a student at the Slade, was often to be found scaling the rusticated walls of University College, or circumambulating the quadrangle on the cornices. Perhaps, in a repetition of such exploits in his native town he found the material for his picture. If not, I should be interested to learn what scaffolding he used to secure a view that is certainly not gained from the ground.

*

THE LAYMAN AND ARCHITECTURE

A young woman with some promising business ability came to see me this week, armed with an introduction. She had got a job in which a knowledge of architecture, while not essential, would certainly make her business life more interesting, and render her more efficient.

*

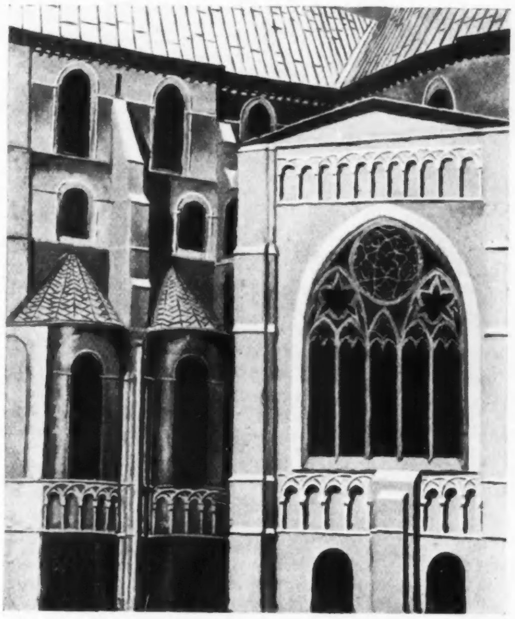
"I don't want to feel a fool, technically," she said. "I've got a month before I go to this job. What can I learn about architecture in that time? I'm prepared to work hard at reading, if you think it's any use."

*

What was the answer to that one? She had a completely blank mind, architecturally speaking, and it was perilously easy to fill it with the wrong stuff, so I sketched some diagrams of the principal methods of construction, post and lintel, arch, and cantilever, and I gave her a list of books.

*

They were to be taken, I said, in the following order: Howard Robertson's *Architecture Explained;* Christian Barman's essay in Benn's sixpennies, *Architecture;* W. R. Lethaby's *Architecture*, in the Home University Library; *The Principles of Architectural Composition*, by Howard Robertson; *The Appreciation of Architecture*, by Robert Byron; *The Pleasures of Architecture*, by C. and A. Williams-Ellis, and John Gloag's *Men and Buildings*.



The South Transept, Canterbury Cathedral. From the exhibition of paintings by William Townsend at the Wertheim Gallery. See Astragal's note on this page.

*

To this wodge of reading (and readable) matter, I added that mine of reference illustrations, Sir Banister Fletcher's *History of Architecture.*

*

I am going to check up on the effect of this curriculum in a few weeks. It should be a good test of the ability of these various authors. Will they collectively inform or confuse the untrained lay mind?

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, September 28

EXHIBITION OF LIVERPOOL HOUSING SCHEMES. At the *Central Lending Library, William Brown Street, Liverpool.* Until September 30.

LONDON SOCIETY. Visit to the Church of St. Alfege, *Church Street, Greenwich.* 2.45 p.m.

Saturday, September 30

Sunrise 6.58 a.m. Sunset 6.41 p.m.

ST. PAUL'S ECCLESIOLOGICAL SOCIETY. Visit to Kingston-upon-Thames. *Meet at Town Hall.* 2.30 p.m.

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. Visit to slum clearance schemes. Until October 6. Newcastle (September 30–October 2); South Shields and Middlesbrough (October 3); Nottingham (October 4); Birmingham and Bournville (October 5 and 6).

Tuesday, October 3

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the *Home Office Industrial Museum, Horseferry Road, S.W.1.* "The Trapping and Utilization of Condensation." By Alan G. Royle, B.SC. 6.45 p.m.

Wednesday, October 4

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. First of twenty-four lectures on the History of Architecture. By Sir Banister Fletcher, PP.R.I.B.A. 6.30 p.m.

HOUSING EXHIBITION. At the *Kelvin Hall, Glasgow.* Until October 28.

NEWS

◆

POINTS FROM THIS ISSUE

The architect of the near future will neglect photography at his peril 375

Our exhibitions are just as wrong, internationally speaking, as our films 376

"We are in time in this country to avoid what has been done in England —the destruction of the countryside in the neighbourhood of the towns." 379

Result of the Surbiton Hospital Competition 380

An opportunity for architects to strike out individually and boldly for whatever conception of modern style their imagination dictates 380

Housing in Italy is carried out on lines different from those followed in any other country 388

If the steel frame is to be used extensively for the construction of the dwelling house, it must be provided with a flexible skin 395

◆

GOVERNMENT OFFICES IN WHITEHALL AND EDINBURGH

We understand that the Office of Works has asked the R.I.B.A. to nominate ten architects, English and Scottish, whose names will be submitted to an English Committee for the new Government building in Whitehall, and to a Scottish Committee for the new Government offices on the site of Calton Gaol, Edinburgh. Each committee will then select an architect to carry out the work. Parliamentary powers have yet to be obtained to erect the buildings.

The Whitehall scheme is estimated to cost £2,000,000, and the Edinburgh scheme some £400,000.

CARLTON HOUSE TERRACE

The future of Carlton House Terrace, which was discussed at meetings in London last week, is to be the subject of a meeting of the Crown Lands Advisory Committee on October 17, when the L.C.C. and local authorities will put forward their views.

CHIEF INSPECTOR OF ANCIENT MONUMENTS

On September 21, Sir Charles Peers, F.R.I.B.A., Chief Inspector of Ancient Monuments, retired from his post at the Office of Works, a position he has occupied for over twenty years. The First Commissioner of Works has appointed Mr. J. P. Bushe-Fox, Inspector of Ancient Monuments for England, to the post vacated by Sir Charles Peers.

BUILDING LEADS THE WAY!

Since the commencement of the campaign of the Special Committee for Public Relations in January, the total decline of unemployment in the United Kingdom amounts to 469,700. The building, allied and dependent industries count for over 50 per cent. of this movement, showing a decline of 251,170. Unemployment in the construction industries declined by 167,260 ; in the industries mainly dependent by 34,645 ; in the industries substantially and directly affected, by 7,275 ; and in industries indirectly affected, by 41,990. The indirect repercussions of this improvement largely account for the decline in unemployment in the other industries catering for the home market. This is but one aspect of the effects of the work of the Special Committee.

The stimulus to national economic welfare of increasing activity in the building and construction industries must continue. Cheques for subscriptions should be made payable to "The Special Committee for Public Relations," and should be addressed to the Hon. Treasurer, at 5 Duke Street, Adelphi, W.C.2.

The following sums have been received :—Yorkshire Amalgamated Products, Ltd. (3rd and 4th instalments of £100), £50 ; National Radiator Co., Ltd., £25 ; the total received to date amounts to £3,069 17s. 10d.

ARCHITECTURE AND MODERN MACHINERY

Mr. Eric Gill, in an article on machine-made buildings in *The Manchester Evening Chronicle*, suggested that "One of the chief things that is wrong with our modern cities is that as regards architecture we are still carrying on, architects and their clients are still carrying on, or trying to carry on, as though modern machinery did not exist. Instead of being proud of our machinery and parading its powers we seem to be ashamed of it. We pretend we have not got any. We put up buildings in all the styles of architecture except the one which is really convenient or really honest.

"What is wanted now, and especially in cities like Manchester with a highly-developed and conscious corporate life, is the growth of a strong tide of opinion in favour of honest machine-made building.

"In a machine-run civilization the place for hand-made things is the museum of curiosities. Let us face that fact and no longer be ashamed of it. Must we really hand ourselves down to be the scorn of future generations as a people so lacking in courage that they were ashamed of the genuine products of their own inventive genius ?"

NATIONAL SMOKE ABATEMENT SOCIETY

Demands for the reduction of the domestic smoke nuisance in the rebuilding of slum areas were made in a joint paper by Messrs. R. H. Clayton and Charles Gandy at the annual conference of the National Smoke Abatement Society, held at Sheffield last week-end.

The authors of the paper suggested that the time had come for municipalities to give the work of smoke prevention its rightful place in their own activities. It was opportune to consider how best to prevent the new housing from again becoming an eyesore, as it certainly would if smoke-polluted air continued to play on the new surfaces. There was urgent necessity for special organization, both national and local.

What was required, they continued, was a new committee to co-operate with existing committees, but with the sole duty of developing the methods and building up the organization necessary for dealing with the smoke nuisance, and more particularly that caused by domestic smoke.

PENDLETON HIGH SCHOOL

Lord Colwyn is to open the Pendleton High School for Girls on Monday next, October 2. It has been enlarged at a cost of over £50,000.

TWO NORTH LONDON INSTITUTES

On Monday last, at the Highbury Technical Institute, Mr. P. M. Andrews, A.R.I.B.A., delivered the first of a series of weekly lectures on "The Appreciation of Architecture." On the following day, September 26, he also commenced a similar series of lectures at the Paddington Literary Institute.

REICHSBANK PROJECT

The German Chancellor has sanctioned the expenditure of Rm. 30,000,000 (about £1,500,000) for the rebuilding of the new Reichsbank. Work will begin immediately.

CHELMSFORD ARCHITECTS' VISIT

On Saturday, September 16, about 30 members of the Chelmsford Chapter of the Essex, Cambridge, and Hertfordshire Society of Architects visited the Rettendon Roofing Tile Works and Rettendon Church.

NEW SEA BATHS FOR BOURNEMOUTH

A scheme is under consideration by the Bournemouth Council for clearing the site of the present obsolete sea-water swimming bath and adjoining premises on the pier approach and building in their place a modern large covered sea-water swimming pool, together with the provision of private hot sea-water baths, sun-bathing lounges overlooking the sea, and probably medical baths.

SLUM

Sir Hilton Young, the Minister of Health, speaking at Grimsby last week, during his tour of the country to study the campaign against slums, referred to the preparation, by local authorities, of slum clearance schemes. He said the intervention of the holiday season made it probable that a large number of programmes would be received towards the end of the time-limit. Such evidence as was available tended to show that there would be a good response to his circular.

The preparation of the programmes was only the first stage in a process which would occupy a number of years, and the fulfilment of which would require continuous hard work, both on the part of the responsible local authorities and of the Ministry.

As soon as the programmes were received they would be reviewed, and conclusions would be drawn as to their adequacy or inadequacy.

The national conscience was fully aroused and the Government, with the support of public opinion, which was now active to the nature of the evil and the necessity for the remedy, would press ahead with the work.

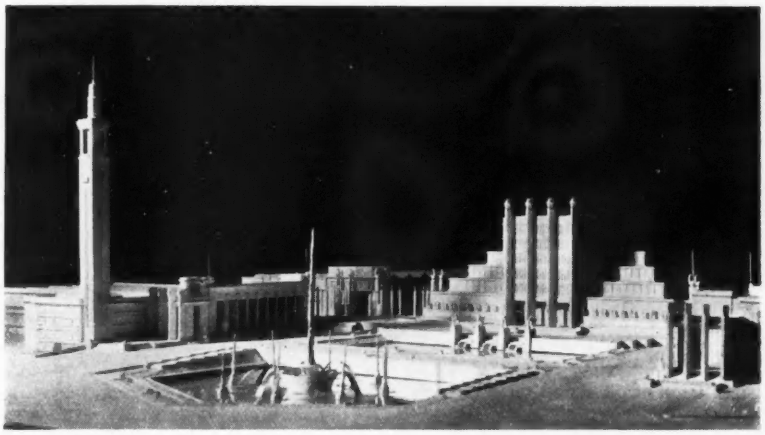
BELFAST'S LITTLE BLACKPOOL

The "Little Blackpool" scheme, which the Belfast Corporation contemplated, has been abandoned for the present. This is a result of the General Purposes Committee's decision to drop their proposed Parliamentary Bill on grounds of economy. The Bill sought powers for the execution of a number of municipal improvements and included a proposal for the reclamation of the mud flats extending from the harbour mouth on the County Antrim side of Belfast Lough to beyond Greencastle.

A few months ago, Mr. R. B. Donald, M.I.C.E., the City Surveyor, acting on the suggestion of a member of the Corporation, drew up an elaborate plan for the development of the reclaimed land over a period of years, and at a huge outlay. It provided for a five-miles promenade, a large amusement pavilion, winter gardens, swimming and boating pools, tennis courts, bowling greens, etc.

ARCHITECTURAL ASSOCIATION

The Architectural Association's annual exhibition of watercolours, etchings and other drawings by members is to be held at 34, Bedford Square, W.C., from October 31 to November 22. All sketches, which should be framed and labelled, must be delivered to the A.A. by October 25. On the same day as the opening of the exhibition, Mr. C. Lovett Gill, F.R.I.B.A., is to deliver his presidential address.



A photograph of the model of the buildings now being erected for the Brussels International Exhibition, 1935. The architect is M. J. Van Neck.

STRAND COTTAGES

The cottages, which were erected on the Bush House site, Strand, from the winning design of the Building Centre Cottage Competition, are to be closed to the public at the end of the month.

The cottages were visited by H.R.H. The Prince of Wales, and many Government officials and housing authorities from all over Great Britain. They have been open to the public since June and have been visited by about 20,000 people and, as a result, direct evidence is available up to the present that about 500 such cottages are being built by public authorities and private individuals in various parts of the country. Thus, housing for upwards of 2,000 people has resulted from the Building Centre's experiment.

FLATS FOR STOKE NEWINGTON

The Stoke Newington Borough Council, at their meeting last week, accepted a tender of £45,550 for the erection of a block of 100 flats in Lordship Terrace and Lordship Road, Stoke Newington. The design of the architects, Messrs. Howes and Jackman, was placed first in a limited competition, the result of which was announced in June.

IRISH FREE STATE'S PLANNING BILL

Professor R. M. Butler, F.R.I.B.A., Professor of Architecture, University College, Dublin, discussing the Irish Free State's new Town Planning Bill in a recent issue of *The Irish Press*, stated that the Bill was greatly overdue, and action was taken in the nick of time before too great damage had been done. If it was worked in the right way and in the right spirit it would be of immense advantage. "We are in time in this country to avoid what has been done in England—the destruction of the countryside in the neighbourhood of the towns."

He emphasized that the administration of the Act ought to be looked at from the artistic viewpoint, and where local authorities undertook the work, they should do so under competent guidance, such as that of architects, artists and those who were interested in similar subjects. Voluntary advisory councils might act in this way.

The construction of garden cities or satellite villages should be encouraged, and ribbon development discouraged as far as possible.

BATHING POOL FOR BRIGHTON?

The Sea Front Improvements Committee of the Brighton Corporation is to consider the question of a bathing pool. It has been suggested that the pool should be the subject of an architectural competition.

BELFAST ARCHITECT'S ATTEMPTED RESCUE

Mr. William Porte, a well-known Belfast architect, made a plucky attempt to rescue a drowning woman at Carnlough, County Antrim. He jumped into the sea fully dressed. The woman, however, was dead when brought ashore.

BUILDING PROGRESS IN CHINA

We have just received from the North China Daily News and Herald Ltd., a copy of *The China Architects' and Builders' Compendium*, edited by Messrs. J. W. T. Brooke, A.R.I.B.A., and A. T. Davis. In the preface to this—the ninth—issue, it is pointed out that "the conflict between China and Japan, which was still raging when the last edition was published, resulted as anticipated in a general slowing up of trade and a temporary cessation of property market transactions. Recovery has naturally been slow, but during the past few months there has been concrete evidence of restored confidence. In 1932 the estimated value of new buildings for which permits were issued in the International Settlement was Taels 18,000,000, or approximately half that of the previous year. During the first half of 1933, there has been a marked increase in this direction, and there is every prospect that normal conditions will again prevail by the end of the year.

"In city areas, architects and contractors are busy both with business and residential construction, and the development of old Chinese sites is especially marked; factory construction in the Eastern District is very evidently on the up grade also. Foreign and Chinese residential development in the suburbs continues to push the limits still farther out and, with the settlement of questions pertaining to the outside roads, there should be remarkable expansion in this direction. Little, however, has been done up to the present in the reconstruction of ruined Chapei, but work is now proceeding in this district, especially in the rehabilitation of public utilities."

NEW BUILDING IN ST. JAMES'S SQUARE

A nine-storey building is being erected in St. James's Square, London, on the site of what used to be No. 3. The estimated cost of the new building, of which Messrs. Alfred and David Ospalak are the architects, is £350,000.

MANCHESTER SOCIETY OF ARCHITECTS

The last of the series of summer visits arranged by the Society was made on Wednesday evening, September 20, when a second visit was paid to Mr. Vincent Harris's New Reference Library in St. Peter's Square, Manchester.

There was a very large attendance, and visitors were able to wander at large around the building and to examine the varying architectural treatments of the different departments. These are now in an advanced stage, and the members were able to obtain a good impression of the effect of the finishings and the building as a whole, while it was still possible to view the methods of construction employed.

The removal of the scaffolding from inside the main hall enabled the full effect of the great dome to be realized, and the rooms surrounding the reading hall upon the different floors were also greatly admired.

19TH INTERNATIONAL ART EXHIBITION, VENICE

The Department of Overseas Trade, which is responsible for British participation in the International Art Exhibition at Venice, held every other year, is engaged in organizing a British Exhibit of Fine Art for the Exhibition, the 19th of the series, to be held from May to October, 1934. A Selection Committee is undertaking responsibility for advising the Department of Overseas Trade as to the artists whose work should be considered for inclusion in the British exhibit. The Committee is as follows:—

Messrs. J. B. Manson, Director of the Tate Gallery (Chairman), Francis Dodd, A.R.A., Campbell Dodgson, C.B.E., Martin Hardie, R.I., R.E., Edward Marsh, C.B., C.M.G., C.V.O., C. L. Stocks and Major A. A. Longden, D.S.O., O.B.E.

All communications should be addressed to the Secretary of the Committee, Mr. W. M. Hill, at the Department of Overseas Trade, 35, Old Queen Street, London, S.W.1.

Wallace Marchment, winner of the Surbiton Hospital Competition. (See result below.)

An Exhibit of Fine Art, representative of some of the best of modern British work, was organized for the first time under Government auspices at the last Exhibition held in Venice in 1932.

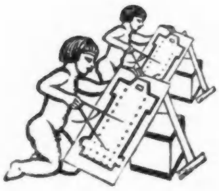
PUBLIC HALL FOR COLWYN BAY

At a meeting of the Colwyn Bay U.D.C. last week, schemes involving an expenditure of nearly £90,000 were unanimously adopted.

The chief scheme provides for the erection of a public hall for entertainments, concerts, etc.

The council also decided to build a new pavilion on the pier in place of the one burnt down earlier in the year.

COMPETITION NEWS



Surbiton Hospital Competition Result

On Tuesday night the result of the competition for a proposed hospital at Surbiton was announced as follows:

DESIGN PLACED FIRST (premium £120): Wallace Marchment, F.R.I.B.A., 11 Stanley House, S.W.8.

DESIGN PLACED SECOND (premium £75): W. Naseby Adams, F.R.I.B.A., 14 Ladbroke Grove, W.

DESIGN PLACED THIRD (premium £50): Nicol and Nicol and Thomas, King's Court, 107 Colmore Row, Birmingham.

DESIGN PLACED FOURTH (premium £25): William Sinning, 26 Queen Victoria Street, E.C.4.

Mr. C. Elcock, F.R.I.B.A., was the assessor.

Bexhill Entertainments Hall

Corporation of Bexhill: Competition for Proposed New Entertainments Hall and Future Development of the Coastguard Site. Assessor: T. S. Tait, F.R.I.B.A. Premiums: £150, £100, £75. Sending-in day: December 4, 1933. Conditions from Town Clerk, Town Hall, Bexhill. Deposit £1.

THE CONDITIONS REVIEWED

By Iodos

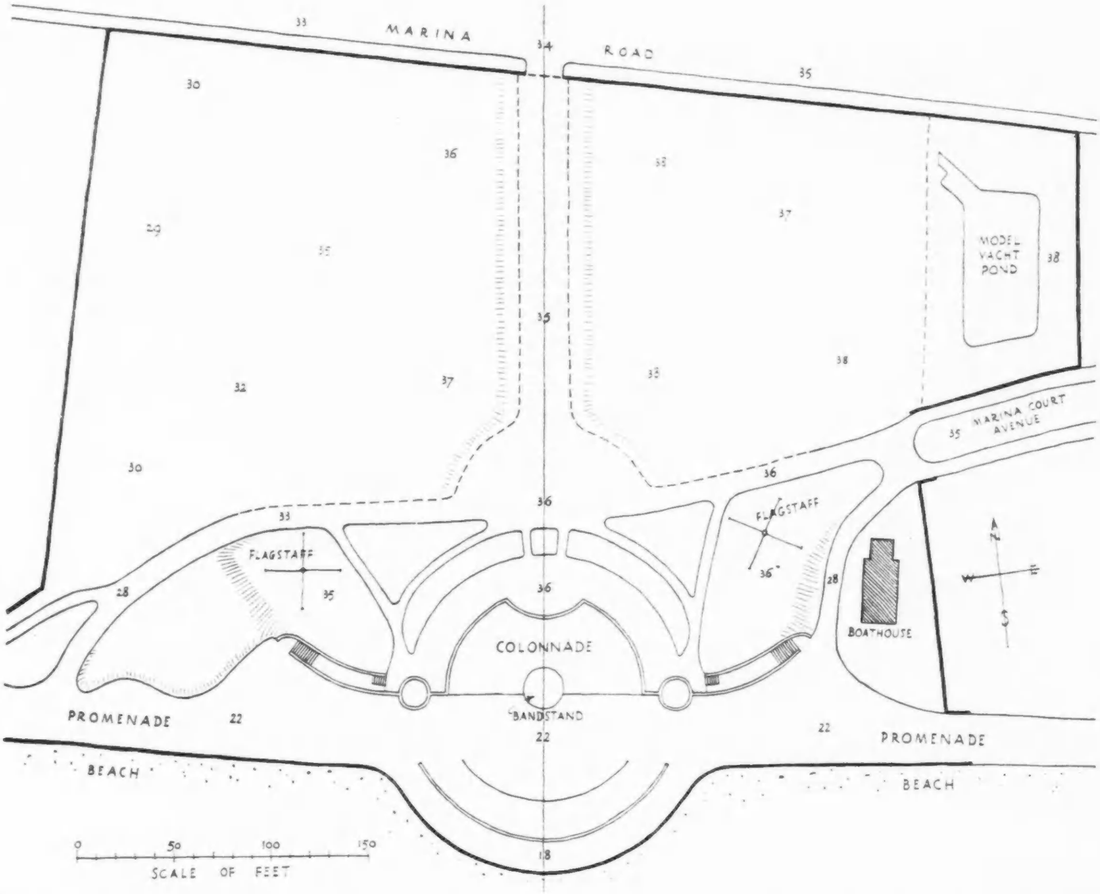
An architecture of pleasure, especially of holiday pleasure in seaside sunshine, is as sadly missing in every part of Britain as it is finely present in many Continental centres. A heavy-handed Victorianism has laid a monstrous blight of gloomy ornament on park and promenade; a sprinkling of more recent buildings gives little relief, since they achieve a little more gaiety only by much more vulgarity. Exceptions there are, such as the sound work of Messrs. Adshead and Ramsey, Messrs. Home and Knight, and Mr. Cowles-Voysey at Worthing, Bournemouth and Hastings; but even tolerable schemes are very rare.

So this competition for a centre of public entertainment at Bexhill provides a well-timed chance for British architects to show their mettle. With Mr. Tait as assessor they need fear no bias in favour of Victorian or any other tradition, but can strike out individually and boldly for whatever conception of modern style their imagination dictates. The conditions suggest only that character "can be obtained by the use of large window-spaces, terraces and canopies," and should be "simple, light in appearance and attractive, suitable for a holiday resort."

THE CONDITIONS

The general conditions of the competition are normal and satisfactory and call for no comment, but some knotty problems and a number of questions and uncertainties quickly arise as one passes on to analyze the schedule of accommodation and the block plan.

The intention has clearly been to tie



Bexhill Entertainments Hall Competition : The Site Plan

down the competing architect as little as possible : this is doubtless the best way to encourage imaginative schemes, but no excuse for the rather meagre amount of *information* supplied. Under the circumstances no serious competitor should fail to make a thorough personal inspection of the site. Competitors may be well advised to wait for the answers to the large number of questions which are bound to be asked before carrying their designs beyond a very preliminary stage.

THE SITE

The site, facing southwards to the sea, is a fine one, open and ample for all the desired accommodation in a garden setting (the plan here reproduced has been redrawn from that supplied with the conditions, to give the essential information more legibly and simply). But though open and ample, the site is not without difficulties. While the whole area between Marina Road and the Beach "may be considered as available for the scheme," all the sea frontage has already been developed as an elaborate Bandstand Enclosure and Colonnade in a garden and terrace lay-out. Competitors are at liberty to suggest alterations to these works and will almost certainly wish to do so ; but *radical* alteration to the retaining walls and main form of the lay-out will scarcely be possible within the £50,000 which the Corporation allow for the whole scheme. Thus it will be difficult to depart from the very marked centre-line established by the Colonnade. But this centre-line is not normal to Marina Road which, as the main approach, also demands some axiality of treatment.

The rival demands of the Marina and Colonnade approaches further complicate the planning, which is required to be arranged round a single common entrance hall, opening to all the public rooms without long corridors. How to alter the Colonnade inexpensively ; what main centre-line, if any, to adopt ; where to place the main entrances from north and south—those are leading questions which only a visit to the site can solve satisfactorily.

The existing coastguards' cottages are definitely to be removed (and have for clarity been omitted from the plan given here), but the conditions do not indicate whether the Model Yacht Pond and the Boathouse are to be retained, either in their present or in some altered form. It is to be hoped that the answers to questions will remove this uncertainty.

THE BUILDINGS

As already noted, the schedule of accommodation has purposely been made as simple and elastic as possible. Nothing is said about the floor level of the different rooms, though everything points to a scheme with all or the greater part of its public accommodation on a single floor. Above this floor extensive roof terraces, over at least a part of the scheme, are definitely asked for ; and it may prove convenient to put the heating and plant rooms and chair storage in a basement or semi-basement. The units may be listed as follows :—

1. Entrance, etc.
   Entrance hall ; "spacious" and giving access to all public rooms.
   Information bureau.
   Manager's office.
   Clerk's office ; "small."
   Public cloakrooms ; both sexes, "ample."
   Public lavatories ; both sexes.
   Staff lavatories.

No superficial areas are suggested ; a total of about 3,000 sq. ft. would perhaps suffice.

2. ENTERTAINMENTS HALL
   Hall ; to seat 1,500 persons, part of whom *may* be in a gallery ; to be multi-purpose with a level floor, but no cinema provision.
   Stage ; " need not be of an elaborate nature."
   Space for organ.
   Artists' changing rooms, etc. both sexes.
   Chair store.

Allowing 6 sq. ft. per person, including gangways, the hall would seem to need about 7,200 sq. ft., if a gallery for 300 were provided. The stage, etc., might bring this up to a total of about 10,000 sq. ft.

3. RESTAURANT
   Restaurant ; to seat 200 persons, facing south on to a terrace overlooking the sea ; part to be " in the form of a sun parlour " ; to be " available for dancing, if necessary."
   Kitchen and service.
   Staff lavatory.
   Chair store.

12 sq. ft. per person is an economical allowance, which would give 2,400 sq. ft. for the restaurant, or, say, 3,500 sq. ft. with the kitchen, etc.

4. CONFERENCE HALL
   Hall ; to seat 200.
   Platform ; additional to the 200.
   Lavatories ; " private " to the conference hall.
   Chair store.

The hall, at 6 sq. ft. per person, would need 1,200 sq. ft., or with the ancillary accommodation perhaps 1,600 sq. ft.

5. READING ROOM, ETC.
   Reading room ; for newspapers and magazines ; to be " in the form of a sun parlour " ; " 600 sq. ft. approx."
   Lounge ; " adjacent to reading room," " 500 sq. ft. approx."

6. ROOF TERRACES
   " The roof over the restaurant and reading room should be constructed to be used as sitting-out terraces," for which a service lift from the kitchen (and presumably some sort of service room) should be provided. Further terrace space over other rooms would probably not be objected to. Well placed outside and inside access-stairs to the terraces will clearly form an important element in the design.

7. HEATING AND PLANT ROOMS
   " Central heating throughout, at least 65° when freezing outside, and artificial ventilation to the entertainments hall and conference hall, at least four changes per hour," are asked for.

DRAWINGS

Plans of each floor, including the roof terraces, three elevations and two sections, all to a scale of 16 ft. to an inch, are to be provided with a block plan of the lay-out and an optional perspective. The finish of the drawings is left to competitors, but should not be elaborate. Competitors may be well advised not to shirk the perspective : the problem is essentially one of 3-dimensional massing and lay-out with a terraced site and treatment, and demands thought and presentation in the round.

Competitions Open

September 30.—Sending-in Day. Competition for speculative house designs, organized by the A.A. with the co-operation of Messrs. J. Laing and Sons, Ltd. Three types of house are required. Assessors : C. Lovett Gill, F.R.I.B.A. ; L. H. Bucknell, F.R.I.B.A. ; J. R. Leathart, F.R.I.B.A. ; Arthur W. Kenyon, F.R.I.B.A. ; T. Alwyn Lloyd, F.R.I.B.A. ; and J. W. Laing. Premiums : £25 for the design placed first in each group. Copies of the conditions are being issued free, on application, to all members of the Architectural Association, and members of the R.I.B.A. can obtain copies (price 2s. 6d.) from Mr. F. R. Yerbury, General Secretary, The Architectural Association, 34-36, Bedford Square, W.C.1. Full particulars of the competition were published in *A.J.* for July 27.

December 15.—Sending-in Day. Messrs. Jenson and Nicholson invite designs for the decoration of a café-restaurant. Assessors : G. Grey Wornum, F.R.I.B.A. ; Louis de Soissons, F.R.I.B.A. ; and G. Alan Fortescue, F.R.I.B.A. Premiums : 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor : H. S. Goodhart-Rendel, F.R.I.B.A. Premiums : £150, £100 and £50. Conditions have not yet been drawn up.

Proposed Extensions to the Town Hall, Swindon. Assessor : Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor : R. S. Wilshere A.R.I.B.A.

Proposed Town Hall and Municipal Buildings, Stoke Newington. Assessor : Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

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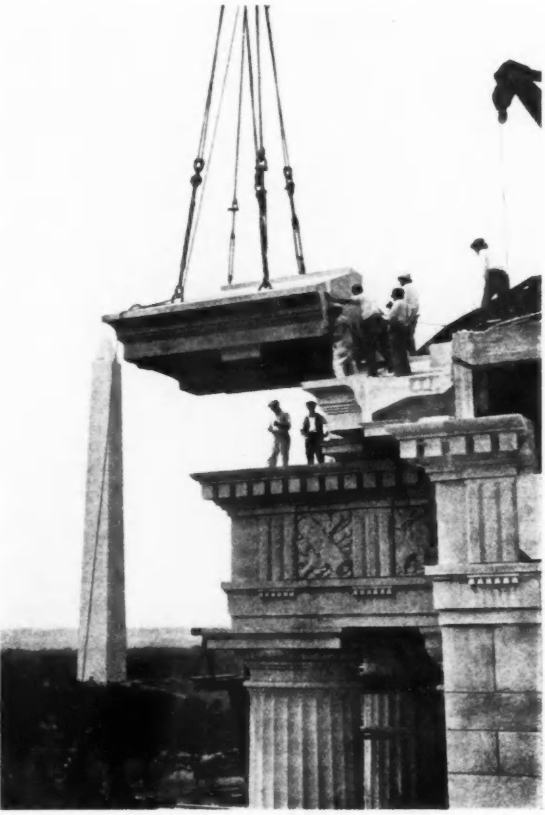
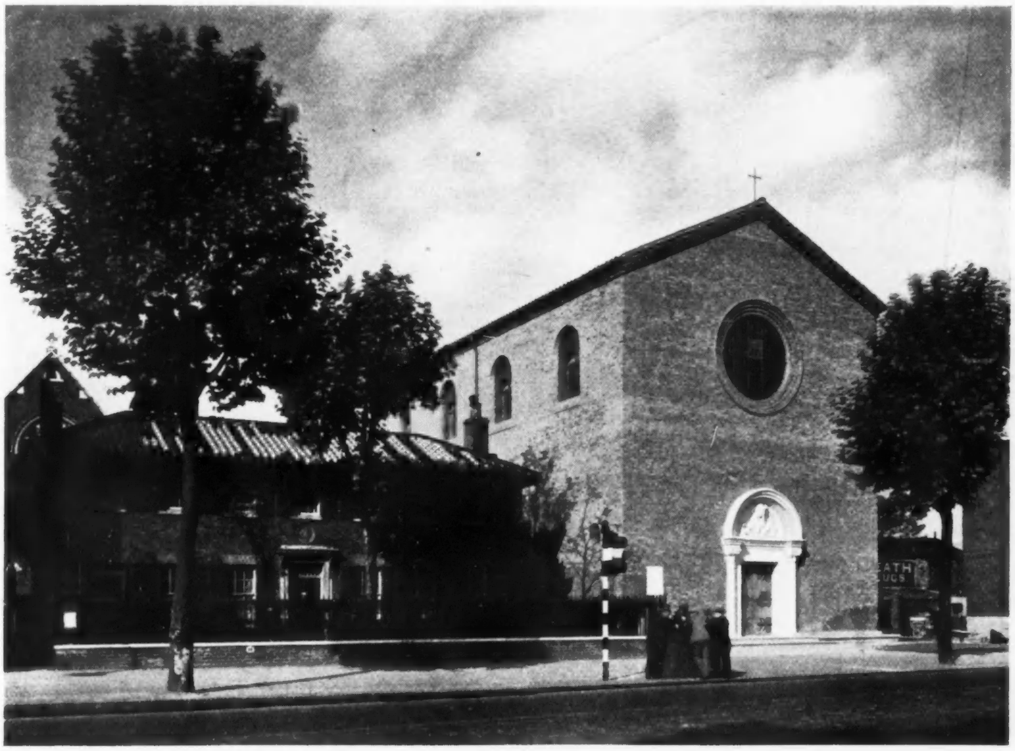


In Washington, U.S.A. (*reproduced from* STONE).

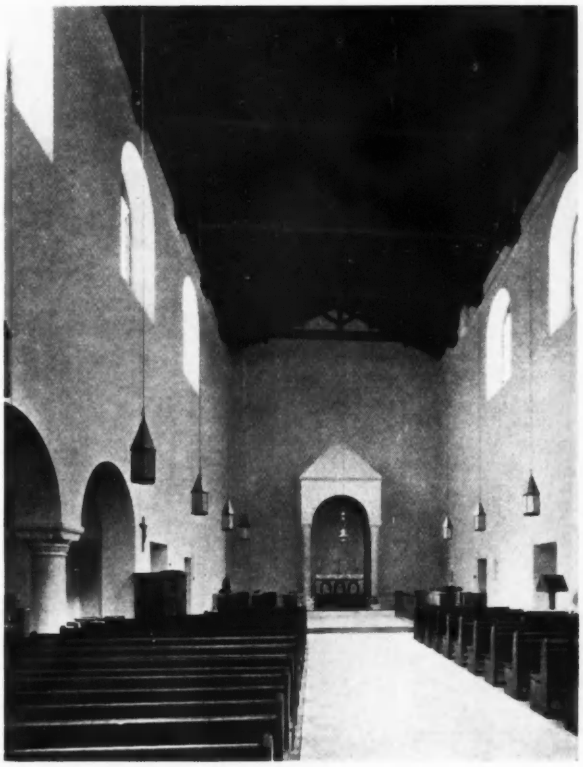
ST. ANSELM'S CHURCH, KENNINGTON



DESIGNED BY ADSHEAD AND RAMSEY

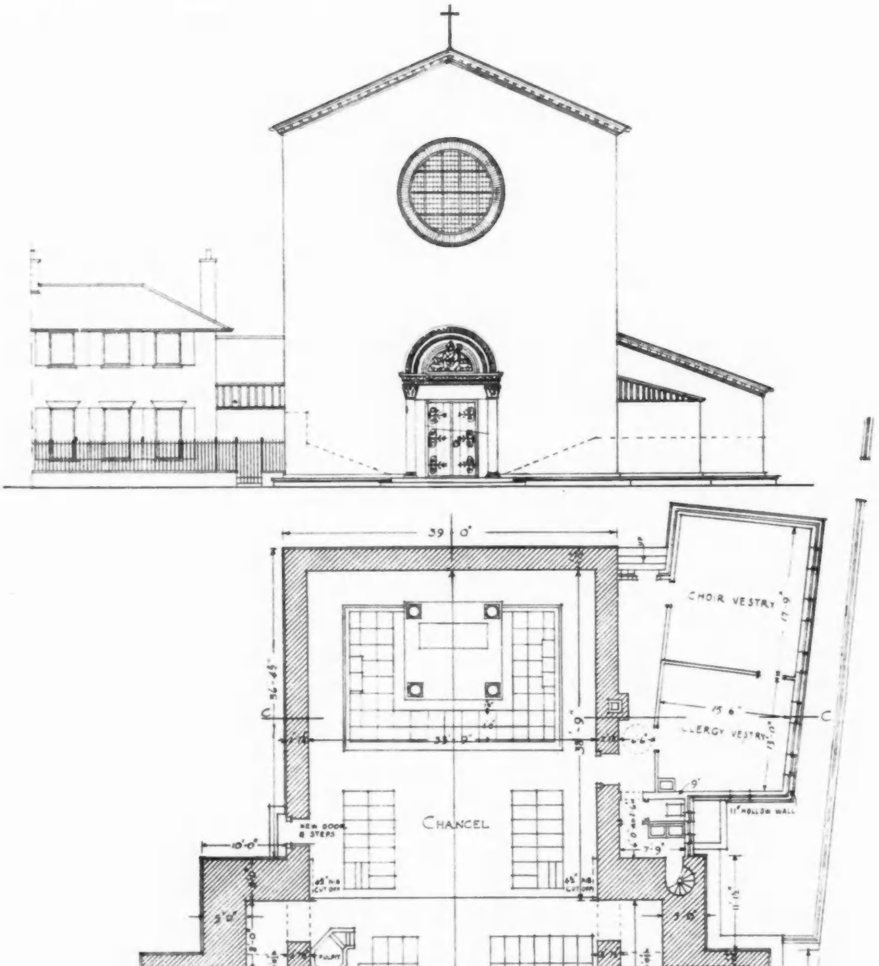
The church, as originally designed in 1913, was to have had a Latin cross plan, crowned by a dome. After the war, however, for financial reasons, it was decided to revert to a simple basilica form as now completed. The originally-planned crossing was filled in with three arches carried on stone columns, leaving one transept as an annexe for children, and the other transept as the Lady Chapel. The organ is in the gallery at the west end, as in the original design. The vicarage, adjoining the church and shown on the left of the above photograph, was built in 1912.

The church was consecrated by the Bishop of Southwark on September 16.



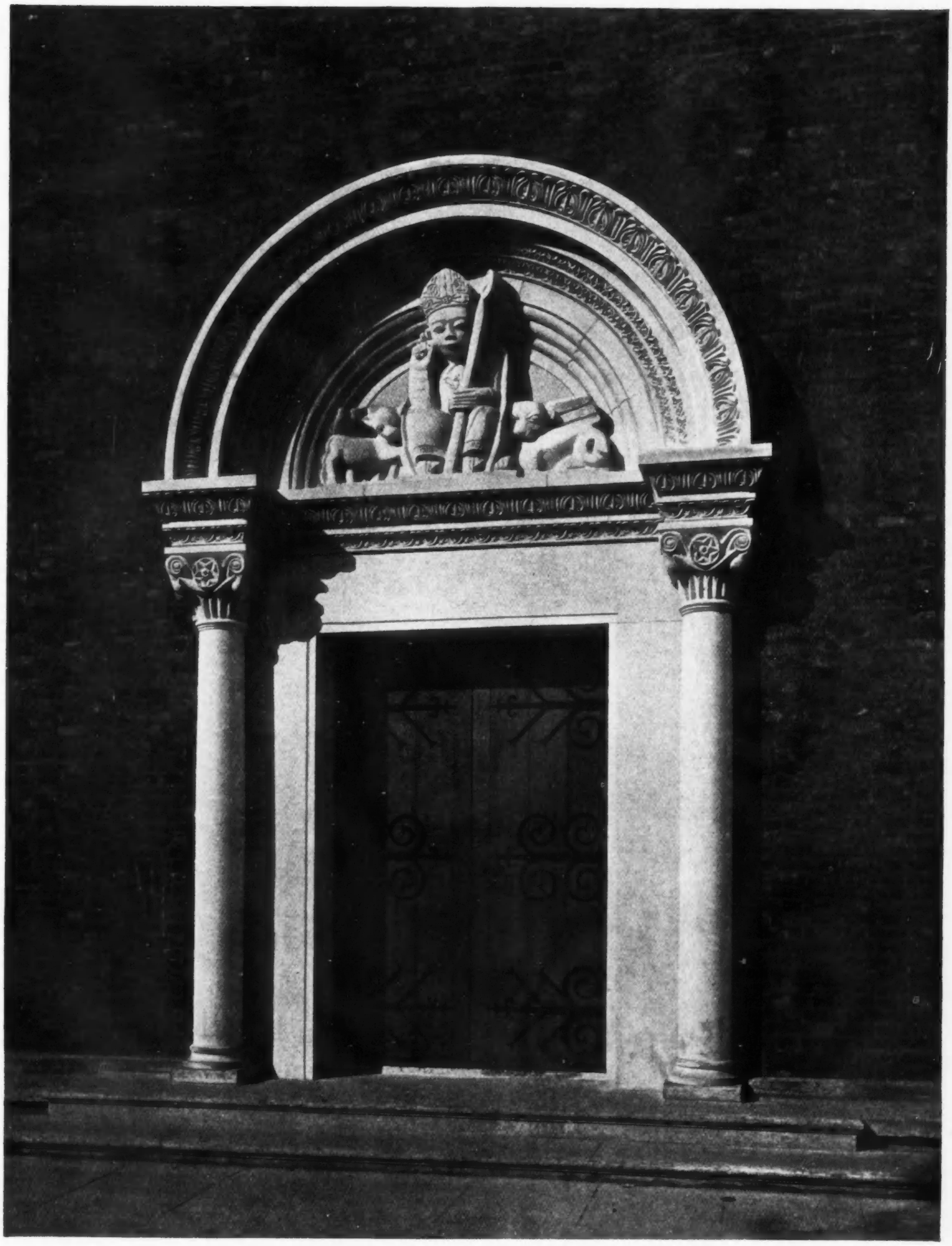
The interior, looking towards the altar.

ST. ANSELM'S CHURCH, KENNINGTON:


CHOIR VESTRY
17'-9"
15'-6"
CLERGY VESTRY
13'-0"
11" HOLLOW WALL
7'-9"
CHANCEL
NEW DOOR & STEPS
39'-0"
35'-9"
33'-9"
56'-6½"
PULPIT
NEW PIER
NEW COLUMN
106'-9"
69'-0"
49'-0"
33'-0"
56'-9"
10'-0"
7'-7½"
5'-0"
ORGAN OVER
19'-0"
16'-7½"
SITE LINE
C
10
0
10
20
30
40

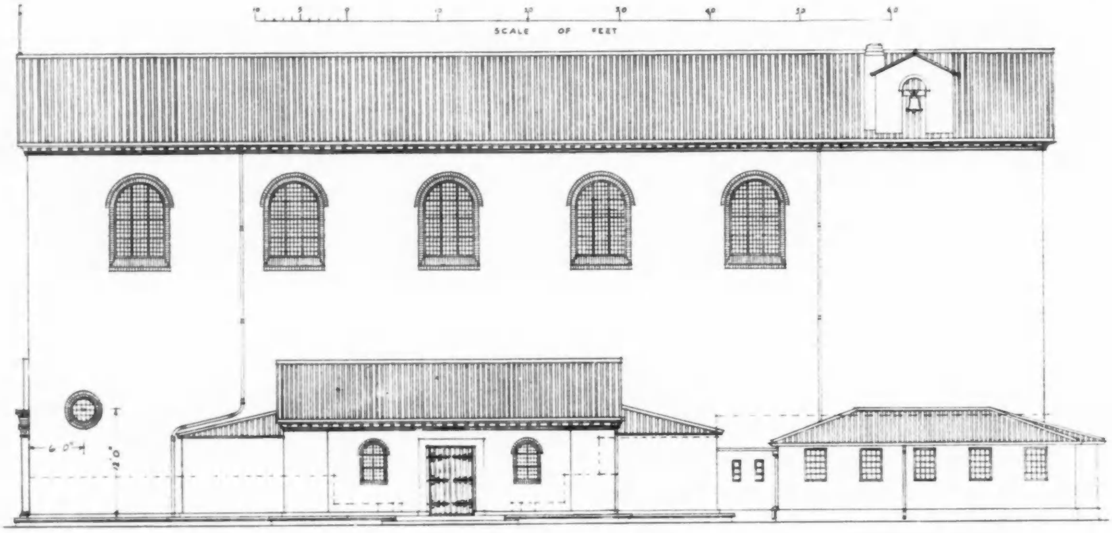
Main floor plan and (above) west elevation, to Kennington Road.

DESIGNED BY ADSHEAD AND RAMSEY

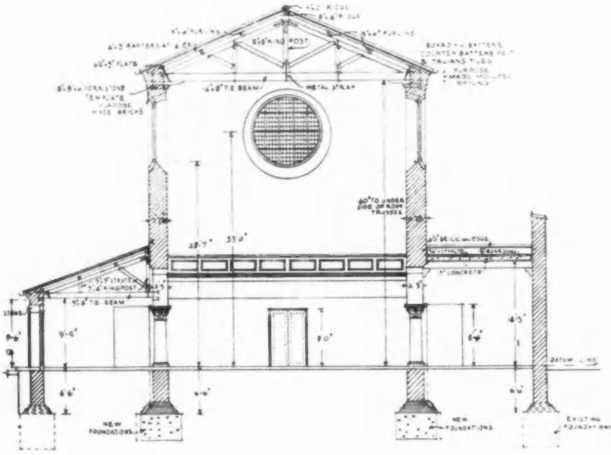


A detail of the Kennington Road entrance doorway. In the tympanum is the figure of St. Anselm, holding the bishop's crook, with a lamb on one side and a lion on the other. The carving and sculpture is by A. H. Gerrard.

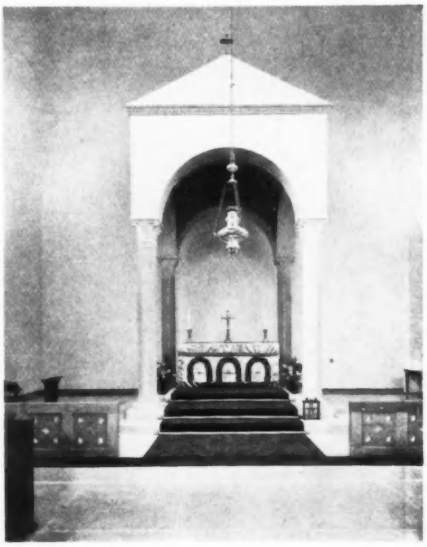
ST. ANSELM'S CHURCH, KENNINGTON


SCALE OF FEET
6'0"

South elevation.


RIDGE
PURLINS
KING POST
PLATE
TIE BEAM
METAL STRAP
BOARDING, BATTENS, COUNTER BATTENS, FELT, ITALIAN TILES
PURPOSE MADE MOULDED BRICKS
YORK STONE TEMPLATE
PURPOSE MADE BRICKS
40'0" TO UNDER SIDE OF ROOF TRUSSES
28'7"
33'0"
BRICK ON EDGE
CONCRETE
STRUTS
KING POST
TIE BEAM
9'6"
9'0"
8'0"
16'5"
6'6"
DATUM LINE
NEW FOUNDATIONS
NEW FOUNDATIONS
EXISTING FOUNDATIONS

Cross section.



The altar.

The external walls are faced with London stock bricks and the roof is covered with red Roman tiles, similar to those on the vicarage. The outstanding feature of the interior is the canopy over the altar, which is lighted by concealed floodlights at the side of the church. The general lighting is from lanterns suspended from the roof on either side of the nave. The pulpit, choir stalls and lectern were designed by the architects.

The benches in the nave are from the old Mission Church. Heating is through a grating in the chancel, there being no radiators or pipes.

DESIGNED BY ADSHEAD AND RAMSEY

LETTERS FROM READERS

G. B. J. ATHOE,
Secretary, Incorporated Association of Architects and Surveyors

JOHN E. YERBURY, F.R.I.B.A.

F. R. YERBURY, HON. F.R.I.B.A.

ASSISTANT ARCHITECT

The R.I.B.A. and Schismatic Bodies

SIR,—I am not concerned at the moment with the so-called controversy in regard to the establishment of a new professional body, and one can disregard the uninformed who have aired their views in the professional press. One must, however, take serious notice of an official pronouncement on matters of such general importance as those discussed in the article entitled "The R.I.B.A. and Current Affairs," published in the *R.I.B.A. Journal* for September 9, and given prominence in your own leading article in your issue for September 14.

The pronouncement, which I assume has the authority of the R.I.B.A. Council, contains so many inaccuracies that we of the Incorporated Association of Architects and Surveyors are bound to take serious notice of it, inasmuch as it reflects on the work which has been done, and is being done, by the I.A.A.S.

First, I would deny the accuracy of the R.I.B.A.'s claim that "above all else the Royal Institute has one purpose which underlies every single action which it takes —that is to work for the unity of the profession." I know that time and time again my Council have offered to co-operate with the R.I.B.A., but the overtures have invariably met with rebuffs. The unity of the profession is impossible if "schisms" are manufactured.

In support of its superiority, the R.I.B.A. says:—"It is the R.I.B.A. and *only* the R.I.B.A. which is asked to appoint representatives on innumerable National bodies." Such a statement suggests that the "innumerable National bodies" are composed solely of R.I.B.A. representatives! The Incorporated Association of Architects and Surveyors is represented on the most important bodies mentioned in the statement.

With all respect to the P.R.I.B.A., one cannot accept his Institute's statement—and I imagine that he would be the last to admit it—that he is "universally accepted by the profession and public alike as being the head of the architectural world." I have found from experience that the public know too little about the profession, and I venture to suggest that not one in a thousand of the ordinary public, if questioned, would know what "P.R.I.B.A." meant. Let your readers ask the first layman they meet the name of a prominent architect, and ten chances to one he would say "The man who designed the Cenotaph," and very likely he would give you his name.

As another sign of "achieved power," the R.I.B.A. assert that an instance of R.I.B.A. strength is the agreement of a new Form of Building Contract. I gather from the general trend of opinion in the architectural profession that the 1909 form is preferred to the present one, which is not understood, and the draughtsmanship of which is considered by many as being worse, if possible, than the draughtsmanship of the Registration Act.

As to charity and benevolence, everyone appreciates the good work of the Architects' Benevolent Society, but this is not the only benevolent body connected with the architectural and allied professions. The Incorporated Association of Architects and Surveyors has its own benevolent fund, which has done excellent work, and I am glad to say that its committee has never once refused an application for help.

In regard to the R.I.B.A.'s Code of Professional Practice, I need only say here that quite recently I was directed by my Council to report to the R.I.B.A. a member of that body, whose name, address, qualifications and telephone number were blatantly used in an advertisement in a trade paper. But I am not aware that the R.I.B.A. took any action against him.

The R.I.B.A.'s article goes on to admit that a dinner was held at Conduit Street to *celebrate* the passage of the Registration Act, but in the next breath it infers that there was nothing to celebrate. I have been favoured with a report of the speeches at the dinner, and though, presumably, reports of individual speeches are intended to be verbatim, I find that Lord Crawford's speech was completely left out, as was a good deal that Colonel Moore said on the occasion. Others of the speakers, however, including men who are now among the leaders of the R.I.B.A., were extremely enthusiastic over the Registration Act. I would remind your readers that it was left to THE ARCHITECTS' JOURNAL, in a recent issue, to draw attention to that appalling Clause 17 in the Act, which was drafted and included in the Bill by one of those spokesmen at the dinner and one of those leaders of the R.I.B.A. to whom I have referred. It is a clause which has justly received scathing condemnation. All the same, we are now reaping the harvest of it.

In a booklet criticizing the Bill (as it then was) in 1928, I pointed out the dangers of this clause and begged for its removal. These are the words I used: "While no reasonable critic of the Bill would, or could, deny the right of banks, co-operative societies and corporate bodies of a like nature to continue the practice of conducting their own architectural departments for the purpose of designing *their own buildings*, it is submitted that exception may reasonably be taken to a clause that permits departmental and multiple stores to practise and call themselves "Registered Architects." If this clause is passed in its present form, it is not difficult to visualize, in perhaps the near future, an enterprising storesman advertising "Plans and Architectural Advice may be obtained in the Bargain Basement!"

I now come to perhaps the most important claim put forward by the R.I.B.A: "Within a few months of the formation of the Registration Council the R.I.B.A. proposed to it that a Registration Act Amendment Committee should be formed, and this committee is now sitting under the chairmanship of Mr. Stanley Hall. The initiative in this came from the Institute and the power to promote the suggestion via the Registration Council also comes from the Institute."

This statement is incorrect. What are the facts borne out by documentary evidence and unchallengeable? As one of the representatives of the I.A.A.S. on the Registration Council, it fell to my lot to make the suggestion and to move a resolution that an Amending Act Committee should be set up forthwith, and I believe that I was the first member elected on it. Mr. Stanley Hall, for whom I have the greatest respect, is a member of the Committee, but he is not, and never was, its chairman. The chairman of this committee is Major Harris, who is not an architect or a member of the R.I.B.A.

G. B. J. ATHOE

M.Inst.R.A.

SIR,—I have only just seen the letter from Sir Edwin Lutyens, published in your issue for August 31.

I see that Sir Edwin has been advised that the letters of the President R.I.B.A. and Major Harry Barnes are defamatory, but that only under compulsion will he take any legal action.

Accepting as gospel all that Sir Edwin has written, one still has to put to oneself another question, at the end of all those set out by him, i.e., Is it reasonable to hope that Sir Edwin Lutyens, with his new dignity and the aid of his new baby, will be able to do what he says the R.I.B.A. has failed to do? I think the answer will be another—No.

It is true that the architectural profession is not, at present, comparable with the legal and medical professions; but "Rome was not built in a day." At the moment it is comparable with the profession of accountancy, and if it is to be a really closed profession it surely will be through the initiative of the R.I.B.A., and not through a mushroom society, however distinguished may be its President and some of its members.

"Now is the accepted time," appears to be a favourite text with Sir Edwin Lutyens. "Now" always has been, and always will be, the time for attempting ideals; but we are not informed what the ideals of the new Society are—which Sir Giles Gilbert Scott and Major

Harry Barnes fail to appreciate—unless we are to assume that Sir Edwin Lutyens has set out on a crusade to attain all those things which he so emphatically states the R.I.B.A. has failed to attain.

Sir Edwin was a member of the Council of the R.I.B.A., but I do not remember him as a crusader. It is a pity, with all his talents and influence, that he did not lead us towards the ideals in those days. How much more he might have done by reform inside than he is likely to do by activities outside. After all, there is a tradition behind the R.I.B.A., and who knows what might have been achieved if Sir Edwin had taken a different course?

Sir Edwin Lutyens writes that Sir Giles Gilbert Scott's statement, that "*to join the new Society is to contravene the Declaration of Membership*," is absurd. Is it? The Declaration says, "by every lawful means in my power I will advance the interests and objects of the said Royal Institute." If the new Society is inimical to the interests of the R.I.B.A. (and, personally, I think it is), is it "*absurd*" to say that to join the new Society is a contravention of the declaration?

JOHN E. YERBURY

The Milan Exhibition

SIR,—It is welcome news that the International Exhibition of Decorative and Industrial Art and Architecture at Milan has been extended for another month, until October 31.

In company with some other architects, I have recently returned from a visit to the Exhibition. Particularly in view of the present interest in this country in slum clearance and re-housing, the Exhibition and the new housing schemes in most Italian cities are well worth seeing by all concerned with our own building and housing problems.

The Exhibition is the best and liveliest Italy has produced in the century and modern Italian architecture certainly reflects a new spirit and sense of vitality which can be of the utmost value to us here. Both the architecture and the organization of Italian housing are well worth studying.

Housing in Italy is carried out on lines rather different from those followed in any other country, in so far that it is neither governmental nor municipal, but under the auspices of a central society known as the *Case Popolari*. Each city has its own branch under the direction of a president and various other officials, who undertake the responsibility for the building of flats. They receive a special grant from the Government, are assisted by the provision of cheap land, and can also borrow money at a very low rate. They are not a profit-making concern and are able, owing to the various advantages given to them, to let flats at an economic rent and yield a small return on capital. The activities of the *Case Popolari* have been tremendous in recent years; huge blocks of flats have been erected in almost every town of importance, particularly in Milan and Rome.

This great housing movement represents only one phase of the enormous change which has taken place in Italy in recent years.

A visit to Italy before the Exhibition closes can certainly be commended to architects and all interested in housing problems.

F. R. YERBURY

Contract Clauses in Architects' Specifications

SIR,—I wonder whether one of your readers can tell me why a number of contract clauses are repeated in an architect's specification, and whether this is a usual practice, or just peculiar to the office in which I work.

I realize, of course, that these clauses are essential, and that if there were no standard form of contract they would have to be included in the specification preliminaries. However, it is the repetition that mystifies me, particularly since, in some cases, the wording of the specification clause differs so much from that of the contract clause that the intention of the latter becomes confused.

ASSISTANT ARCHITECT

SOCIETIES AND SCHOOLS

UNIVERSITY OF MANCHESTER

Professor R. A. Cordingley, M.A., A.R.I.B.A., the new Professor of Architecture and Director of the School of Architecture at the above, took up his new position on September 21. The other members of the teaching staff include the following: Mr. J. P. Nunn, B.A. (Manchester) A.R.I.B.A. (*Lecturer in Architecture and Master of Design*); Mr. J. L. Martin, M.A. (Manchester), A.R.I.B.A. (*Assistant Lecturer in Architecture and Master of Elementary Design*); Mr. John Williams (*Lecturer in Building Construction, Hygiene, and Specifications*); Mr. E. S. Forster, M.B.E., M.A. (Oxford) (*Lecturer in Classical Archæology*); Mr. R. H. Wilenski (*Special Lecturer in History of Art*); Mr. F. L. Halliday, A.R.I.B.A. (*Lecturer in Town Planning*).

UNIVERSITY OF DURHAM

The School of Architecture at the University of Durham, Armstrong College, Newcastle-upon-Tyne, the new session of which commenced on Monday last, provides a degree course (B.ARCH.), a diploma course (DIP.ARCH.) and a part-time course, each extending over five years of study.

The degree and diploma courses are whole-time, except that in the fourth and fifth years of study, students must spend the third term in the office of a practising architect.

The part-time course involves attendance on not less than two and a half days per week, and is designed to meet the needs of students who have already entered into articles with a practising architect, or who, for other reasons, are unable to undertake a full-time course.

All courses of study have received the approval of the Council of the R.I.B.A., and the school is one of the recognized schools of that Institute.

Students of the degree and diploma courses successfully passing their third year examination, and students of the part-time course successfully passing their fourth year examination, are eligible for exemption from the Intermediate Examination of the R.I.B.A.; students of the part-time course successfully passing their third year examination are eligible for partial exemption from the Intermediate Examination.

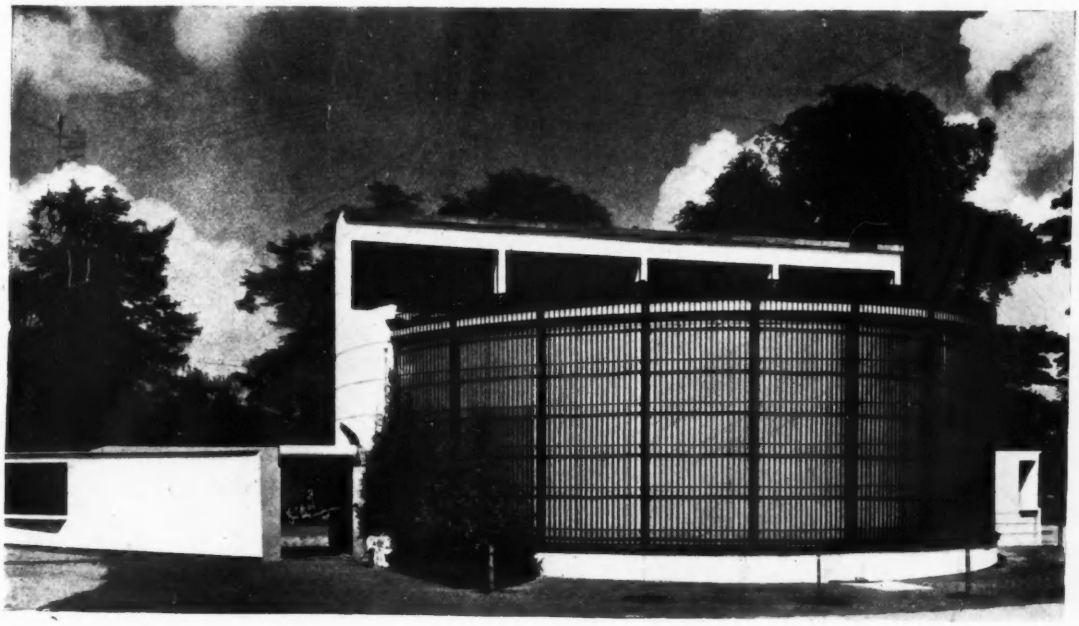
The Master of Architecture is Mr. W. B. Edwards, M.A., B.ARCH., A.R.I.B.A.

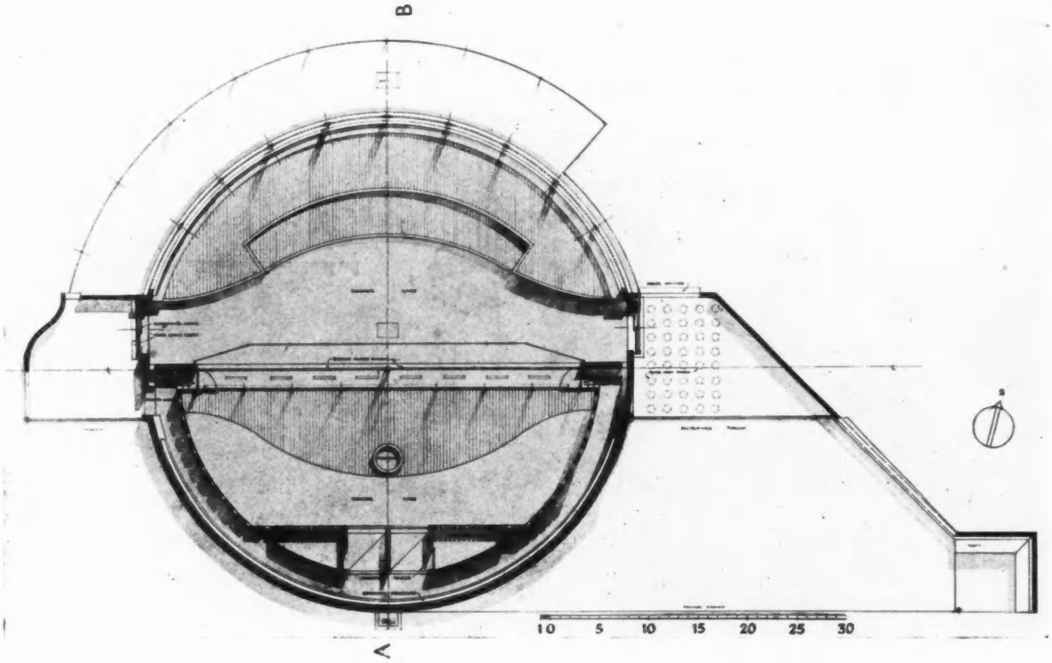
ILLUMINATION DESIGN COURSE

The programme has been issued for the twenty-eighth Illumination Design Course, comprising six lectures, to be delivered on consecutive Monday evenings, commencing October 16 next, at the E.L.M.A. Lighting Service Bureau, 2, Savoy Hill, W.C.2.

The first lecture is entitled "The Electric Lamp—its characteristics and functions in the Lighting Installation," by Mr. L. E. Bucknell. The other lectures are as follows: October 23: "The Lighting Fitting—its development, purpose and design," by Mr. H. C. Wheat; October 30: "Planning Lighting Installations," by Mr. H. Lingard, A.M.I.E.E.; November 6: "Selling Shop Lighting—what the shopkeeper wants and why he wants it," by Mr. E. B. Sawyer; November 13: "Architectural Lighting—what it means to the architect, and what it means to the electrical industry," by Mr. R. O. Sutherland, A.R.I.B.A.; November 20: "The Development of the Lighting Load and an Analysis of the Lighting Market," by Mr. W. J. Jones, M.SC., M.I.E.E. Each lecture begins at 7.30 p.m.

GORILLA HOUSE AT THE ZOO



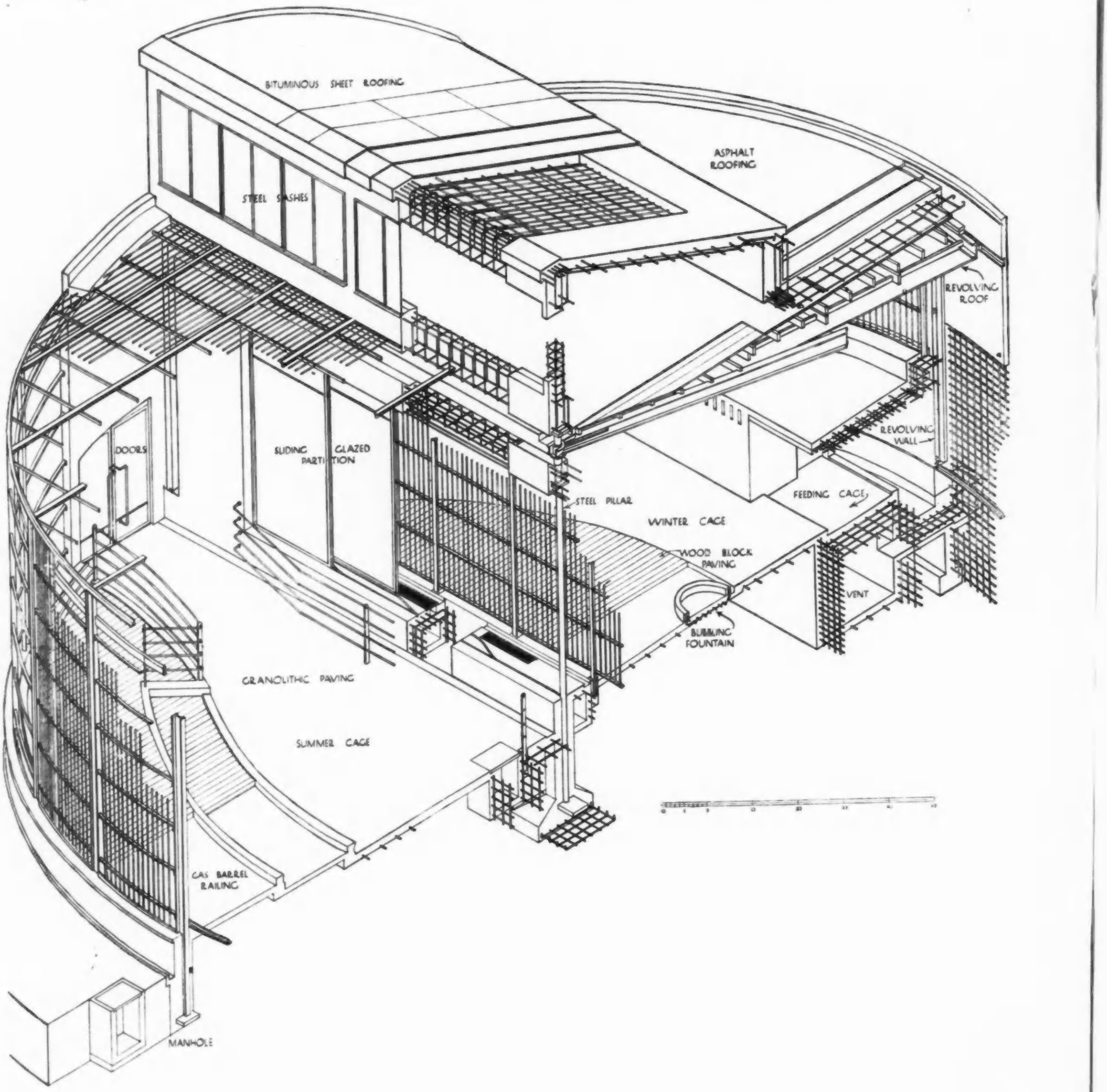


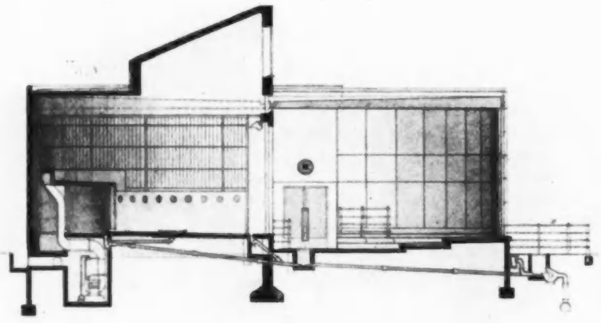
The new gorilla house at the London Zoo consists, besides the entrance and exit porches, of a circular building, one-half of which is the permanent indoor cage and the other half an open cage in summer and a hall for visitors in winter. The solid walls of the latter portion slide round behind the enclosed half of the cage when the weather allows the outdoor portion to be used, and the glass screen separating the two halves also slides away at the same time.

The main structure consists of a semi-circular reinforced concrete wall, 4 ins. thick, spray-painted externally, and finished internally with a 2½ ins. layer of cell-concrete, plaster and paint. The roof is of reinforced concrete, insulated with cork and covered with asphalt. The revolving portion, that converts the summer cage into public space, is pivoted on a solid steel column, its outer edge supported by rollers moving on ball bearings along a steel channel which runs round the top of the building. The roof of this portion, and the wall which hangs from it are built up with a light steel framework, faced with ply-wood.

DESIGNED BY TECTON

GORILLA HOUSE AT THE ZOO:

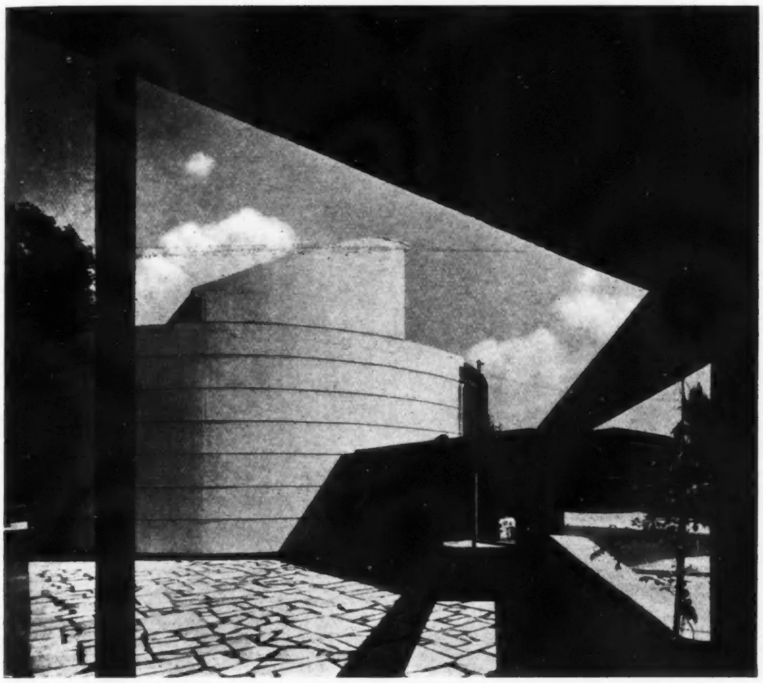

BITUMINOUS SHEET ROOFING
ASPHALT ROOFING
STEEL SASHES
REVOLVING ROOF
REVOLVING WALL
DOORS
SLIDING GLAZED PARTITION
STEEL PILLAR
WINTER CAGE
FEEDING CAGE
WOOD BLOCK PAVING
VENT
BUBBLING FOUNTAIN
GRANOLITHIC PAVING
SUMMER CAGE
GAS BARREL RAILING
MANHOLE

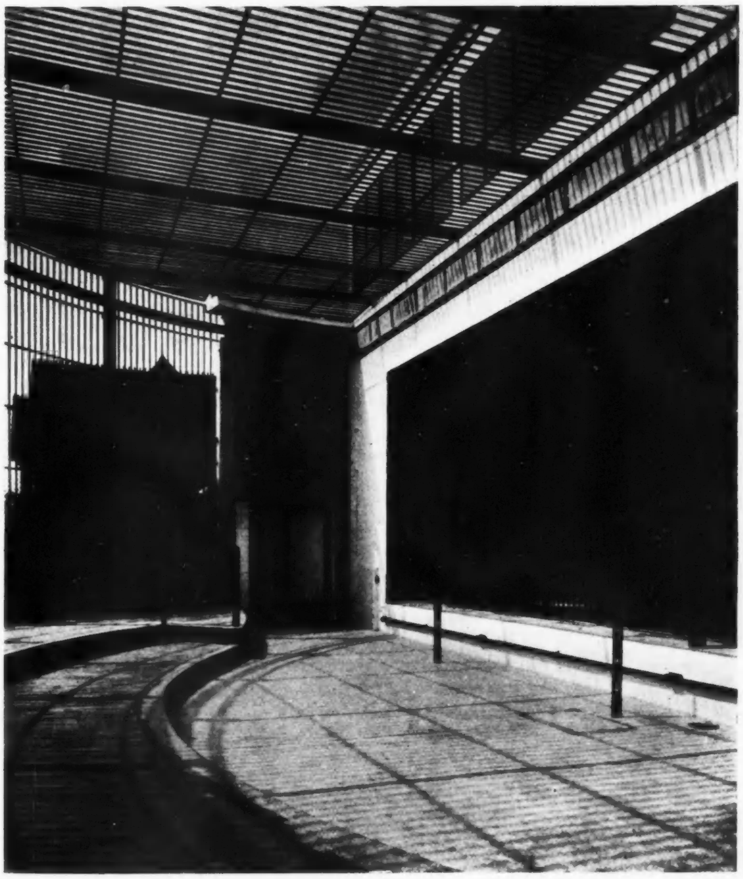


An isometric drawing showing the methods of construction employed; and, left, a section through the winter and summer cages on line A-B (see plan on previous page).

The photographs on the facing page illustrate: top, the gorilla house from the entrance porch, showing the external wall divided into horizontal bands, which are produced by emphasizing the divisions between the "lifts" with deep grooves; bottom: an interior view with the revolving wall open. This portion is lined with natural birch, and the bars are painted blue.

DESIGNED BY TECTON





LAW REPORTS

UNDERTAKING NOT CARRIED OUT

Gidea Park, Ltd., v. *Romford U. D. C.—Chancery Division. Before Mr. Justice Clauson.*

THIS action arose out of an undertaking given by the Romford Urban District Council during certain proceedings before a Committee of the House of Lords on a Bill promoted in 1931 by the Council.

Mr. Gavin Simonds, K.C., for Gidea Park, Ltd., said his clients claimed the specific performance by the Romford Urban District Council of an undertaking by them that they would use their best endeavours to obtain the sanction of the Ministry of Health to a loan for the purpose of executing sewage works for the company's estate, and that the work should proceed with all due diligence. The plaintiffs were proposing to oppose the Bill, and part of the arrangement was that, in consideration of plaintiffs withdrawing that opposition, the defendants would not call on them to pay more than a third of the total cost of the construction of the sewer in Eastern Avenue, which was the arterial road, and a quarter of the cost of the sewer to be constructed in two other roads on the estate—main road and straight roads. The plaintiffs' case was that the undertaking had never been carried out, and they thereupon sought the aid of the Court to enforce it, and, in the alternative, they asked for damages on the ground of breach of that undertaking.

Mr. Spens, K.C., for the defendant Council, said their defence was a denial that there had been any breach of the undertaking and further, they said that no damage had been suffered by the plaintiffs. The Council had made every effort to obtain sanction to the loan, but certain complications arose owing to the Ministry of Health suggesting important changes, which involved a new and comprehensive sewage scheme, consequent upon a change in the boundaries of the district being put forward. His instructions were that his clients took the view that the plaintiffs knew all about them and were aware of the futility of undertaking to get a loan for one part of the estate. And, further, that none of the parties ever thought that such an attempt should be made.

His lordship, after hearing a mass of evidence, awarded plaintiffs £650 as damages for loss of income due to the development of the estate being held up, and granted them a declaration that the undertaking was binding on the Council and ought to be carried out.

His lordship said he came to the conclusion that there had been at least nine months' waste of time through the defendants' failure to honour the undertaking they had given the plaintiffs. The plaintiffs would have the costs of the action, and there would be liberty to apply to the Court in the case of any future failure by the Council to fulfil the undertaking.

INNOCENT REPRESENTATION OR WARRANTY

Wright and Another v. *Coulson.—King's Bench Division. Before Justices Acton and Talbot.*

THIS was an appeal by the plaintiffs from a judgment of Judge Hargreaves, of the West London County Court, and the main issue in the appeal was a judgment by the County Court Judge in favour of the defendant in the action, Mr. W. E. Coulson, on his counter-claim of damages for breach of an alleged oral and express warranty that the drains of a house in Carmalt Gardens, Putney, were in good sanitary order. The defendant set up that this warranty was collateral with the tenancy agreement. The plaintiffs claimed £25 in respect of rent and for some small item in respect of furniture. The County Court Judge found for the plaintiffs for the £25 with costs, and awarded the defendant £93 odd on his counter-claim, holding that there had been the warranty set up by the defendant and a consequent breach. Plaintiffs now appealed from that judgment.

Mr. Edward Terrell, for the appellants, said the point for the decision of the court was whether or not there was, in law, an express warranty with regard to the drainage. The defendant did enquire whether the drains were in order and plaintiffs said they were. The defendant said that that constituted the warranty he sued upon, and upon which he was awarded damages by the County Court Judge. Counsel pointed out that no such condition existed in the lease which was granted the defendant. His submission to the court was that, having regard to the authorities on the point, no warranty could be construed out of what took place between the parties, and that the County Court Judge was wrong in finding for the defendant.

Mr. B. B. Stenham, for the defendant, argued that the circumstances under which the words were spoken must be considered in arriving at a conclusion in this case. The County Court Judge had before him a mass of evidence, and as his findings were facts, that court could not upset them. The plaintiffs were asked by the defendant if the drains were all right, and the answer was in the affirmative, and that, he submitted, was sufficient to support the finding of the Judge in the County Court.

Mr. Justice Acton pointed out that the court here had something which was capable of being an innocent representation, and not actionable, or a warranty. What made it a warranty?

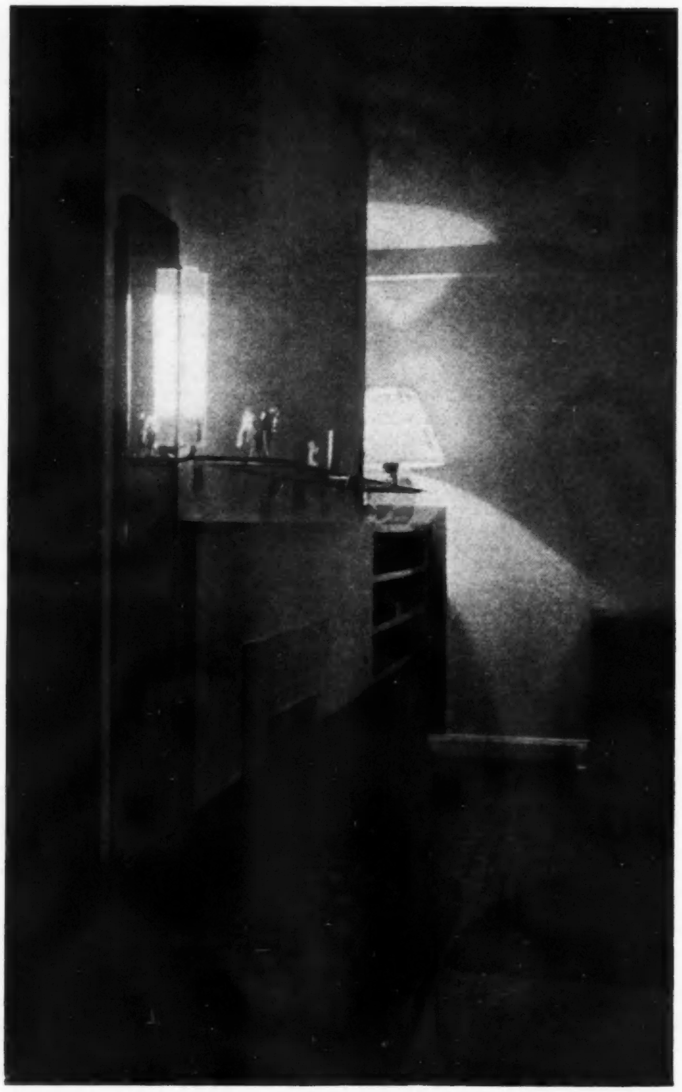
Mr. Stenham urged that the circumstances under which the statement was made turned it into a warranty and not an innocent representation.

Mr. Justice Acton said that having regard to the authorities on the point he could not agree with the submission of counsel.

The court allowed the appeal with costs.

Mr. Justice Acton, in the course of his judgment, said, applying the principles of decided cases to the present appeal, he came to the conclusion that the question whether the words used by the parties constituted a mere innocent representation or amounted to a warranty, was one of law, and, further, that *prima facie*, the words were an innocent representation, and not actionable. He took the view that there was, in the present case, no evidence whatever upon which the County Court Judge could hold that that which would, *prima facie*, be no more than an innocent representation, had been converted into a warranty, to which contractural force was to be given by the intuition of the parties. In his opinion the County Court Judge was wrong in law in arriving at the decision. Mr. Justice Talbot concurred.

FURNITURE IN



A wall of the drawing room showing the fireplace surround and built-in furniture.

The work by Mr. Joseph Emberton in this flat consisted of designs for furniture, fireplace treatments and general decorations.

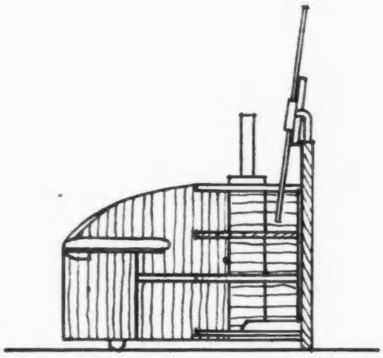
The drawing-room furniture, comprising the wall-treatment shown above, settee and writing table, is in walnut and sycamore.

The bedroom furniture: wardrobe, cupboards, beds and dressing table are entirely of sycamore, picked out with pink cellulose paint.

DESIGNED BY

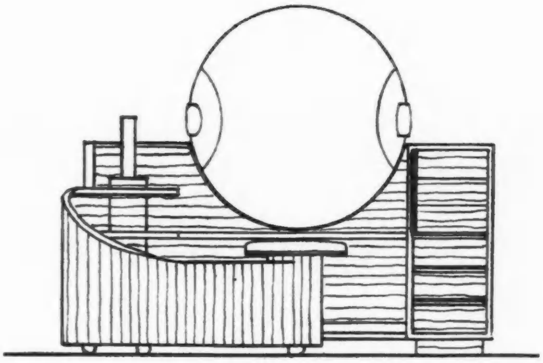
A FLAT AT HAMPSTEAD

The dressing table in the bedroom.

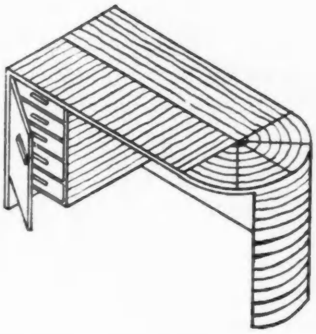


The dressing table—section.

The writing table in the drawing room.

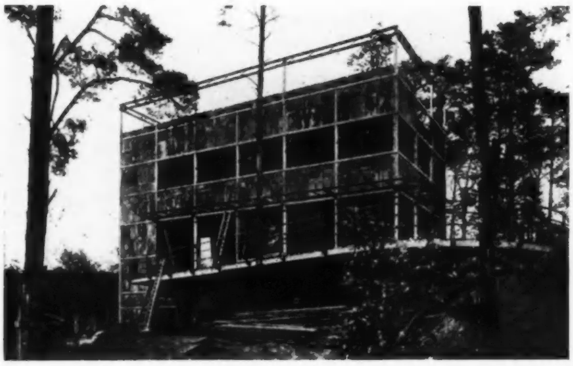


The dressing table—elevation.



The writing table.

JOSEPH EMBERTON



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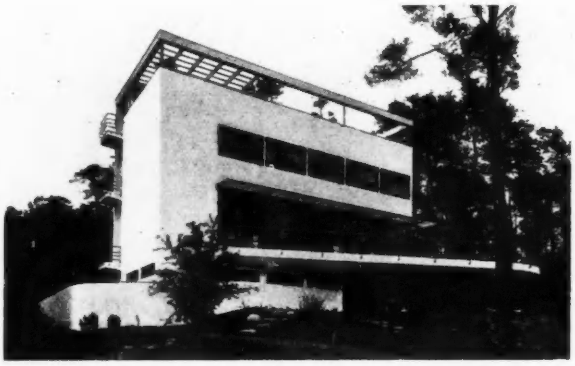

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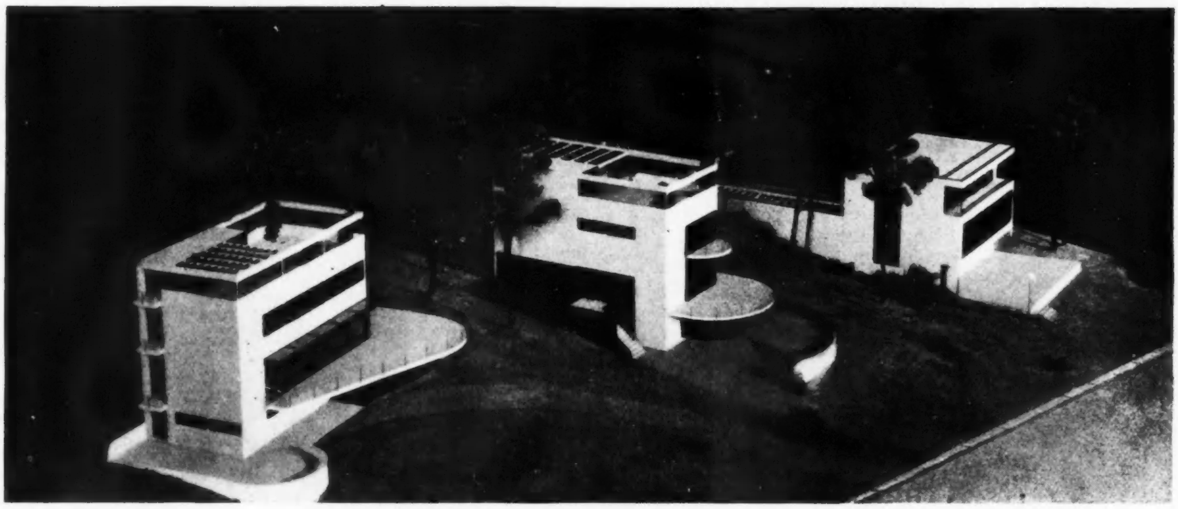

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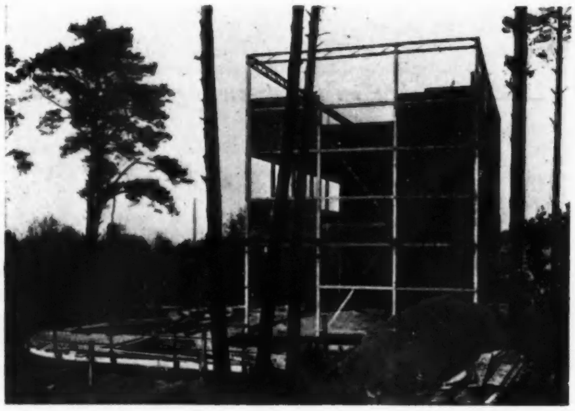

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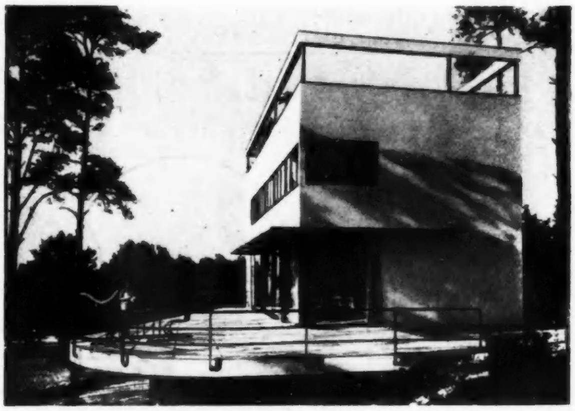
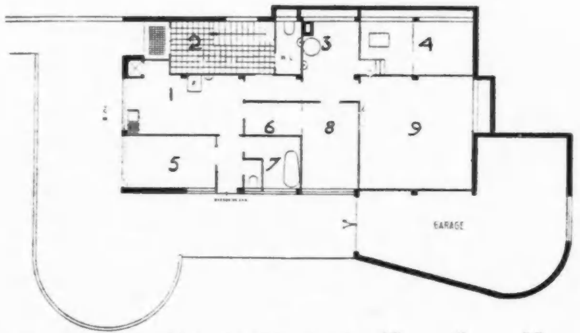


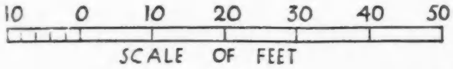
5

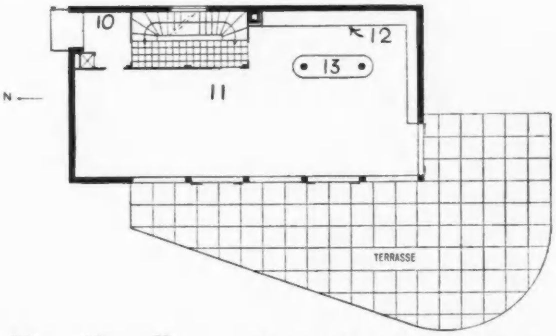
These houses, reproduced from the book reviewed on the facing page, are constructed of light steel skeleton framework, with an infilling of light pre-cast and well dried concrete plates, rendered and painted externally and plastered internally.

The illustrations show: 1: Under construction, view from the south-west. 2: The completed house, view from the north-west. 3: Model of the group of three houses. 4 and 5: The south front under construction and completed. The wide projecting terrace is cantilevered from the curved wall of the garage.

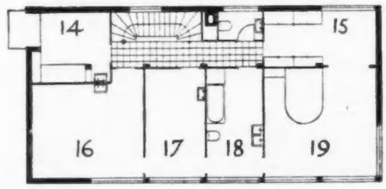


LOWER GROUND FLOOR PLAN

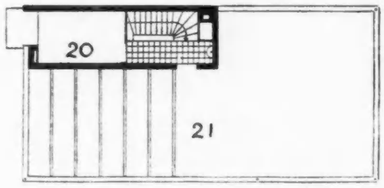




GROUND FLOOR PLAN



FIRST FLOOR PLAN



ROOF PLAN

KEY TO ACCOMMODATION

1. Kitchen; 2. Vestibule; 3. Laundry; 4. Fuel; 5. Chauffeur's room; 6, 7, 8, 9. Servants' quarters; 10. Service from lift to dining-room; 11. Living room; 12. Library; 13. Table; 14. Maid's room; 15. Dressing room; 16. Bedroom; 17. Bedroom; 18. Bathroom; 19. Bedroom; 20. Store; 21. Roof garden.

LITERATURE

EXPERIMENTAL HOUSE CONSTRUCTION IN GERMANY

[*By John Potter*]

Zur Neuen Wohnform. Architekten: B. D. A. Luckhardt and Anker. Bauwelt-Verlag. Berlin, S.W.68. Marks 8.20.

THE brothers Luckhardt and Alfons Anker, with the engineer Otto Muller, have conducted research and experiment over a number of years in order to arrive at the requirements, and the means of fulfilling these requirements, of the modern dwelling house; and the main facts of their arguments in favour of the type of house they have recently been building are outlined in the few pages of text that follow the illustrated part of this book, devoted to their work.

The chief requirements, they postulate, are:

The visible surfaces of the building, inside and outside, should be clean, even, and, as far as possible, smooth and sharp cornered, without projections or recesses.

The outer surface must be weather resistant and weather repellent.

The inner surface must be hygienic and easily cleaned, joints and cracks should be avoided, and there must be no likelihood of opening where joints occur.

The internal surfaces must be dry throughout, when the building is covered, and must remain so.

The resistance to heat and sound of all parts enclosing rooms must be greater than hitherto.

In spite of these particularly stringent requirements, the quantity of material put into the house, the thickness of walls and so on must be reduced, and the way opened for progressive economy.

The walls, in which there are to be no openings, must be so constructed that parts of them may be omitted without consequent reduction of stability.

The house must be provided with all the latest scientific domestic devices and the expense of these met by economies in planning, and reduced construction costs.

Since planning, today, is more economical in space, the cost of the building must be calculated in relation to the habitation value of similar buildings, rather than per unit of volume erected.

The dwelling house of today, as exemplified by the buildings here illustrated, cannot, in view of the above mentioned requirements, be carried out, freely, with the building materials and methods hitherto in common use. The wall constructed of bricks, laid in rows one over the other, which is simultaneously capable of carrying weight and retaining heat, used in conjunction with building timber, often of poor quality in these days, does not offer constructional elements for such work.

Supporting and protective elements must be erected independently of one another. Both must be of high grade materials. For supporting parts we have iron, steel, concrete and reinforced concrete; for enveloping and insulating parts we have a great variety of new light-weight materials; aerated concrete, laminated wood board, fibreboard, patent blocks and hollow tiles, and other special materials. If the steel frame is to be used extensively for the construction of the dwelling house, it must be provided with a flexible skin, so that there can be no surface cracking, due to movement in the steel with variations in temperature.

Such a triple shell wall is shown in Figs. 6 and 7 (on page 396); this is the type of construction generally

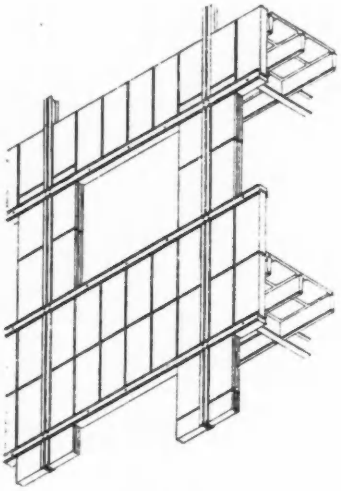


Figure 6

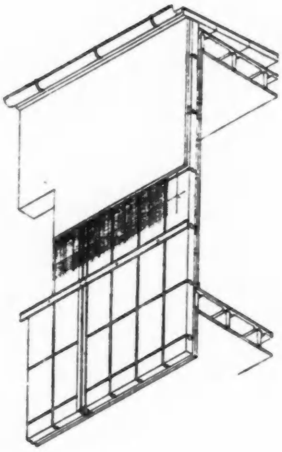


Figure 7

employed in the houses that this book illustrates. The iron frame can move freely in accordance with the changing temperature without detriment to the inner and outer skins.

Fig. 6 shows skeleton construction of outer wall.

Fig. 7 shows outer wall structure with roof joint.

The roofs of these framework buildings are made with pumice concrete interposed between steel roof joists, so that the girders are completely enveloped in cement.

The method of building the roof is similar to that employed for the walls: three shells, with two considerably divided up air spaces between them.

The roof structure is carried out entirely, with pre-fabricated, well-dried, light concrete plates. This can be done in any weather. It dries in a few days, and the usual present-day German type of roofing, in which insulating layers are covered with a thickness of concrete, is superimposed.

The skeleton construction, as shown by the framework in the illustrations, is carried out completely as dry erection building. Thus, even during the skeleton construction, all the building parts can be fixed in, whereas otherwise they could not be included owing to the dampness of the building. By these are meant the fixing of the skeleton iron staircase, the piping and wiring systems and even the service lift, which can be seen in the photographs of the skeleton building. During the finishing of the building, the metal doors and windows are fixed.

The doors consist of doubled locking plate panels in steel frames. Linoleum is used as a general floor covering. Rubber is laid in the bathrooms. Both these floor materials lie on an asphalt layer, which is separated from the floor by a thickness of pasteboard. Smooth gypsum plaster with a washable finish is used throughout the interior.

Apart from the internal and external plasterwork and the concrete foundations under each pillar, the construction is from dry elements only. No attempt is made to avoid the use of damp plaster since there is at present no suitable substitute that provides a perfectly smooth wall surface.

Terrace houses and flats by the same designers are also illustrated in the book. These are not constructed with iron skeleton frames, but with concrete frames, and 16 cms. thick dividing walls between houses and with concrete floors and roof. The concrete framework can be carried out with a minimum of labour by mass production with unit shuttering and the concrete pump now in use.

OUR SECRETARIES

• 14 •

A. L. ROBERTS

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION

MR. ARTHUR LEONARD ROBERTS, F.R.I.B.A., succeeded Lt.-Col. R. F. Gutteridge, F.R.I.B.A., as hon. secretary of the Hampshire and Isle of Wight Architectural Association in 1925. During his term of office the Association has been entirely reorganized; the membership has increased from 87 to over 300, and its activities have been extended in many directions.

Mr. Roberts, as county architect for Hampshire, has been responsible for a large number of buildings in that county. These include the County Council offices, and the restoration of the County Hall, Winchester; Divisional Headquarters, Police Station and Quarters, Eastleigh; schools at Liss, Bordon, Langrish, Southampton, Christchurch, etc.; and a large number of houses.

Mr. Roberts, who is fifty-six years of age, became a Fellow of the R.I.B.A. in 1928.

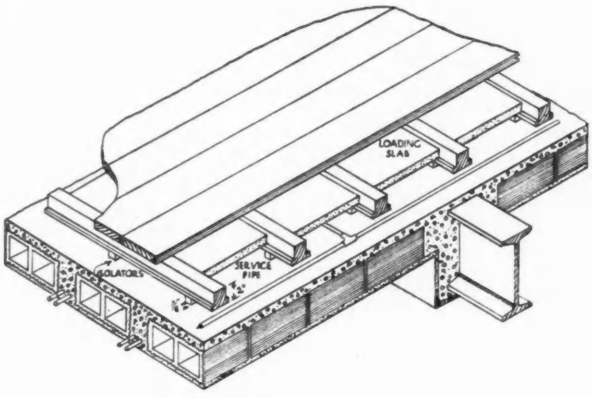
THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue:—

St. Anselm's Church, Kennington (pages 383-386). General contractor, William Downs. A. H. Gerrard, carving; Miss Dunbar, altar cloth. Sub-contractors: Chase & Co., McClary heating system; Pearse & Co., leaded lights; E. C. Blackmore, ornamental hinges; Saml. Elliott and Sons, Ltd., all woodwork; G. Jackson and Sons, ciborium; Grierson, Ltd., electric lighting and fittings.

Gorilla House, Zoological Gardens (pages 389-391). Sub-contractors: Christiani and Nielsen, Ltd., excavation, foundations, reinforced concrete, cell concrete and plaster: Ruberoid Co., damp courses; Pilkington & Co., round glass lights; Williams and Williams, Ltd., sliding doors and windows, door furniture, casements, sliding gates; Hall and Kay, special plant for heating, lighting and ventilation; Dennison, Kett & Co., rolling shutter, fireproof doors and iron staircase; Croggon & Co., caging; J. and E. Hall, revolving structure.

Flat at Bell Moor, Hampstead (pages 392-393). Bovis, Ltd., decorations; D. Burkle and Son, Ltd., furniture; Pilkington Bros., Ltd., mirrors.



TRADE NOTES

[*BY F. R. S. YORKE, A.R.I.B.A.*]

New Soundproof Floor

REALIZING that the demand for soundproof floors, capable of isolating a lower room against impact noise from a room above, is increasing rapidly, Messrs. H. W. Cullum have taken the most usual type of floor, that of wood boards laid on battens, and set about soundproofing it.

●

They have produced, and patented, and are now marketing a floor composed of battens resting on resilient rubber isolating pads, and loaded to an exact and predetermined value by thin solid concrete plates or slabs.

●

This floating floor can be laid over any of the usual types of fire-proof hollow-tile or concrete slab. It is quickly constructed and its overall thickness is less than 4 ins.

In all experiments directed towards the perfection of the floor the manufacturers had in mind the following conditions :—

1. That no modification necessary to produce adequate insulation should greatly increase the cost of the floor.
2. That the life of the construction should be reasonably long and therefore the materials used should be durable.
3. That the principle should be applicable with equally satisfactory results to all the varying conditions of load and shock
4. That to be met in practice. likely increase in thickness and weight should be kept down to a minimum.

●

The only components in addition to those of standard floor board and batten finish are rubber isolators secured to the underside of the battens and concrete loading slabs. The battens are cut from the solid with ledges to hold the loading slabs. Floor clips are eliminated since the concrete slabs hold the battens rigidly in position. The cost is only a few shillings per yard super more than ordinary batten and board finish.

●

The durability of a normal joist and floor board finish is well known, but criticism may be levelled at the isolators by those who have been unfortunate in their experience with rubber. However, reports issued by the Rubber Growers' Association show that under reasonably favourable conditions, rubber will retain its nature through 60 years of service, and these conditions :

(*a*) Complete absence of oil ;
(*b*) Fairly constant and moderate temperature ;
(*c*) Absence of light ;
(*d*) A certain amount of movement ;

are embodied in the Cullum soundproofing system.

●

The loading slabs occupy the upper part of the space between the battens. Their purpose is, primarily, to provide a substantial floating mass to receive any impacts on the floor. Since the weight of the floor is high when compared with any reasonable superimposed load, normal variation in load will have a negligible effect on the deflection of the isolators. Also, shocks of an order likely to be suffered by the floor will produce little deflection in so heavy a mass. The constants of the rubber isolators are so determined that, with the loading applied by the slabs, the greater part of the sound energy is absorbed within the isolators.

●

The floor has been tested by the Western Electric Co., and their full report may be obtained from the manufacturers. They say that the amount, expressed in percentage, by which the loudness of the transmitted noise is reduced by the soundproof floor and a covering material compared with a hollow tile floor covered with a similar material is, in the case of Turkey carpet, 60 per cent. to 5 per cent. Conditions identical with the soundproof floor are obtained only with a ⅞ in. thickness of Akoustikos felt, a material so soft as to render impossible its use in practice.

●

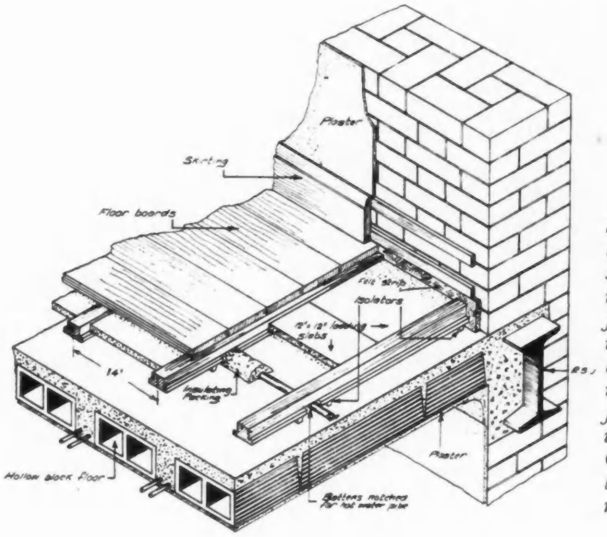
The only apparent disadvantage of the floor is the increase in weight imposed by the concrete slabs. An advantageous provision is the cavity resulting from the thickness of the isolators in which pipes and conduits may be laid in any direction.

Armourplate Glass

Pilkington Brothers have recently issued a brochure dealing with the physical properties of Armourplate glass, some of which—it will bend, twist and resist hard knocks and high temperatures—have not hitherto been associated with glass.

●

Armourplate is a natural glass manufactured from single sheets of ordinary polished plate, and as no organic interlayer



Soundproof flooring laid over the structural slabs. The diagram illustrates the provision for insulation of skirting, and the cutting of battens and spacing of isolators to make room for hot water pipes and insulating packing. Conduits and wires, less than ⅞ in. diameter, require no special provision.

is introduced there is no change in transparency, or discoloration, even, it is claimed, with years of use or when the glass is subjected to severe changes of temperature.

●

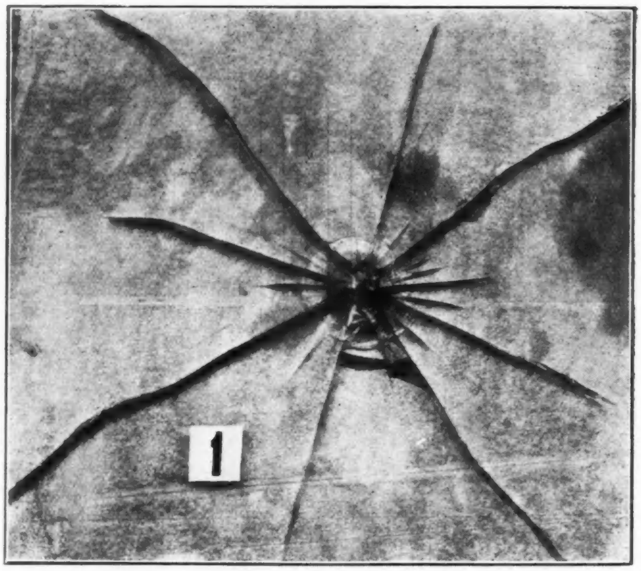
During manufacture the glass undergoes a process of sudden chilling, which sets it into strain. It is heated uniformly, to softening temperature, before the cooling down begins. As glass is a bad conductor of heat, only the outside surfaces at first try to contract. The contraction of the surfaces is resisted by the incompressible liquid glass in the centre, so the skins at this stage are in tension and are stretched. The glass is now a " thermal sandwich " with the skins colder than the central layer, but owing to the stretching of the skins the sheet is only slightly stressed. When the glass reaches room temperature the centre layer has cooled from a higher temperature than the surface. It is trying to assume a shorter dimension. This produces strong compression in the two outer layers with tension in the centre. The glass has now become a " stress sandwich."

●

If it is smashed the glass does not fly into sharp splinters but disintegrates into innumerable small, almost rectangular pieces, about the size of peas, that are comparatively blunt edged and may be crumbled between the fingers.

●

Armourplate will withstand a dead load three to four times greater than can be borne by ordinary plate. A piece of $\frac{1}{4}$ in. Armourplate, 45 ins. by 10 ins., supported at each end, breaks under a central load of 230 to 280 lb., whereas ordinary plate glass breaks under a load of about 50 lb.



Fracture of ordinary plate glass due to sudden impact. Size of sheet 14 ins. × 10 ins.

The amount of deflection under any given load is the same for Armourplate as for ordinary plate glass, but the former will stand a greater load, and consequently the extent to which it can be bent without breaking is greater than for ordinary plate glass. In the examples just cited the deflections are about 2·48 to 3·18 ins. and ·52 in. respectively.

●

Armourplate can be supplied in the following sizes and types :—

Clear Polished Plate. Thickness in inches.	Maximum dimensions in inches. Length.	Width.
$\frac{3}{16}$ in (see note 1)	51 ins.	25 ins.
$\frac{1}{4}$ in. (,, ,, 2)	70 ins.	30 ins.
$\frac{5}{16}$ in. (,, ,, 3)	70 ins.	36 ins.
$\frac{3}{8}$ in.	70 ins.	52 ins.
$\frac{1}{2}$ in.	70 ins.	52 ins.
$\frac{5}{8}$ in.	70 ins.	52 ins.

Note 1.	$\frac{3}{16}$ in. thick.	Sizes over 2 ft. super to be not less than 4·8 mm. thick.
Note 2.	$\frac{1}{4}$ in. ,,	Also up to 36 ins. wide, provided the footage does not exceed 9 ft. super. Plates over 9 ft. super will be supplied in $\frac{3}{8}$ in. full.
Note 3.	$\frac{5}{16}$ in. ,,	Also up to 45 ins. wide, provided footage does not exceed 14 ft. super.

●

Armourplate black glass can be supplied in $\frac{5}{16}$ in. and upwards in sizes up to 70 ins. by 54 ins. It is suggested by the manufacturers that all black glass used in exterior shopfitting and decorative work should be Armourplate, to prevent possible breakage due to sudden changes in climatic temperature.

Worked Glasses. Most shapes, unless too irregular, can be supplied. Notches with sharp corners are not recommended.

Bends. Glasses with slight bends can be undertaken, but each order would require consideration before acceptance. Armourplate dome glasses cannot be supplied.

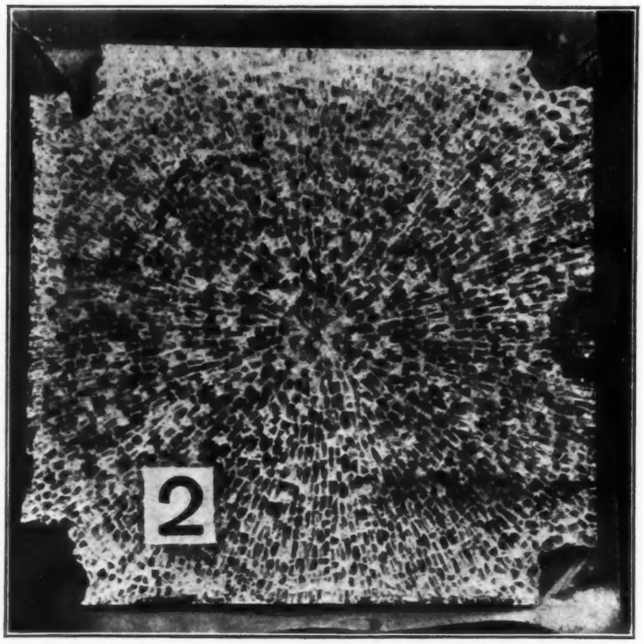
Embossed, etc. Armourplate glass in the sizes previously mentioned can be supplied after the glass has been embossed, brilliant cut, or sandblasted, provided it has not been worked to a great depth.

Holes. Armourplate glass can be supplied with drilled holes, provided the distance from a square corner is not less than in the table below :—

Thickness.	in. $\frac{3}{16}$	in. $\frac{1}{4}$	in. $\frac{5}{16}$ & $\frac{3}{8}$	in. $\frac{1}{2}$	in. $\frac{5}{8}$
Distance to edge of hole or countersunk from 90 deg. corner	$\frac{7}{8}$	$1\frac{3}{8}$	$1\frac{3}{4}$	$2\frac{3}{4}$	$3\frac{3}{4}$

In drilled work the width of glass and size of hole must not be less than :—

Thickness.	Width.	Min. diam. of hole.
$\frac{1}{4}$ in.	2 ins.	$\frac{1}{4}$ in.
$\frac{5}{16}$ in.	3 ins.	$\frac{5}{16}$ in.
$\frac{3}{8}$ in.	3 ins.	$\frac{3}{8}$ in.
$\frac{1}{2}$ in.	$3\frac{1}{2}$ ins.	$\frac{1}{2}$ in.



Fracture of Armourplate glass due to sudden impact. Size of sheet 6 ins. × 6 ins. Armourplate glass acquires through the hardening or toughening process a remarkable increase in strength over ordinary plate glass of corresponding thickness. Impact tests show that whereas ordinary plate glass $\frac{1}{4}$ in. thick breaks when a steel ball 1.68 lb. in weight is dropped upon it from a height of about 13 ins., a drop of 96 ins. is usually necessary to break a piece of Armourplate glass of similar size and thickness.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

Plans passed by the LEWISHAM B.C. : Additions, "Bee Hive" beerhouse, Courthill Road, for Messrs. Ward, Saul & Co. ; two houses, Cambridge Road, for Messrs. Thos. Allen (Lee), Ltd. ; seven houses, Crantock Road, for Messrs. James Watt (Catford), Ltd. ; four houses, Thorpewood Avenue, for Messrs. Walker, Clinging & Co. ; four houses, Hazelbank Road, for Mr. G. T. Harman ; adapting skating rink as garage, Sangley Road, for Mr. Wm. Casse ; rebuilding, 55-7 Longton Avenue, for Messrs. Higgins Bros. ; two houses, Upwood Road, and rebuilding, 48-56 Cambridge Road, for Messrs. Thos. Allen (Lee), Ltd. ; hall, Downham Way, for Messrs. Geo. Parker and Son, Ltd. ; 58 houses, Hall Park estate, for Messrs. A. J. Glock, Ltd. ; five houses, Peak Hill, for Messrs. Brett and Son ; land development, Canonbie Road, Forest Hill, for Messrs. Snow Bros. ; new streets, Woodlands estate, for Mr. T. J. Bee ; development, Perry Hill estate, Catford, and land development, Thornsbeach Road, Catford, for Mr. L. A. Culliford.

Plans passed by the ORSETT R.D.C. : Twenty-houses, Highfield Gardens, Little Thurrock, for Mr. Stark ; three houses, Woodview, Little Thurrock, for Mr. F. C. Stark ; five houses, Laird Avenue, Little Thurrock, for Mr. C. Stark ; two houses, Balfour Road, Little Thurrock, for Mr. Lambert ; 12 houses, Medina Road, Little Thurrock, for Mr. Redington ; hall and classrooms, St. Davids Road, Langdon Hills, for the Trustees of the Baptist Church ; road, Horndon-on-the-Hill, for Mr. Price ; two houses, Corrindham Road, Stanford-le-Hope, for Mr. Yates ; three houses, Nelson Road, Southfields Estate, for Mr. James.

Plans passed at PURLEY : Four houses, Hadyn Avenue, for Mr. H. W. Lee ; two houses, Hartley Way, for Mr. F. A. Freeman ; amended plans, cinema, Brighton Road, for Mr. H. S. Scott ; two houses, Manor Wood Road, for Messrs. R. D. Taylor, Ltd. ; two houses, Famet Avenue, for Messrs. E. T. Brown and Son.

Plans passed by the WALTHAMSTOW Corporation : 124 houses, Verulam Gardens, etc., for Messrs. Partridge and Daniel ; 10 houses, Fyfield Road, for Mr. A. Good ; alterations, County Arms, Highams Park, for Trust Houses, Ltd. ; development, Sky Peals estate, for South Essex Property Co.

The Middlesex C.C. is seeking sanction to borrow £15,136 for the erection of an elementary school in Glebe Avenue, Kenton, WEALDSTONE.

SOUTHERN COUNTIES

THE BISHOPS STORTFORD U.D.C. is to clear the Tuckers Row area and erect 26 houses.

The Ashford Builders Co. is in negotiation with the BISHOPS STORTFORD U.D.C. as to guarantees for 124 houses which the company proposes to erect in the district.

The BISHOPS STORTFORD U.D.C. has obtained sanction for a loan of £14,302, for the erection of houses.

Plans passed by the DORCHESTER Corporation : Workshop, etc., East Parade, for Messrs. W. Willmott and Son ; two houses, Monmouth Road, for Mr. W. B. Elliott ; choir assembly lobby, Methodist Church, South Street, for the trustees ; two houses, Acland Road, for Mr. H. T. Marks ; two houses, Cambridge Road, for Messrs. Moore and Samways ; two houses, South Court Avenue, for Messrs. G. Fry and Son ; alterations, Star Inn, Icen Way, for Messrs. Eldridge Pope & Co., Ltd. ; alterations, Happer's Mite Almshouse, South Street, for Dorchester Municipal Charities.

Plans passed by the RAMSGATE Corporation : Two houses, Ethelbert Road, for Mr. J. Summers ; two houses, Margate Road, for Messrs. D. Dorman & Co. ; additions, premises in Margate Road, for Messrs. C. Home and Sons ; 12 houses, St. James Avenue, Newington, for Mr. F. Field ; four houses, Nethercourt Hill, for Messrs. Horshams ; two houses, Hereson Road, for Mr. W. J. Austen ; four houses, Margate Road, for Messrs. Darby and Martin ; additions, St. Lawrence Laundry, Manston Road, for Mr. F. Jarvis ; eight houses, St. Lawrence Avenue, for Mr. W. R. Troughton ; alterations to premises, Cliff Street, for the Conservative Club ; four shops, etc., High Street, St. Lawrence, for Mrs. F. L. Schooling ; additions, "K" Laundry, Northwood, for "K" Laundry, Ltd.

SOUTH-WESTERN COUNTIES

The Somerset Education Committee is seeking sanction to borrow £13,275 for the erection of a school at TIMSBURY.

MIDLAND COUNTIES

The CHESTERFIELD R.D.C. is considering the following applications for the erection of houses : Heath Parish Council for a further 50 houses on North Wingfield Estate ; Brimington Parish Council for 14 houses at Newbridge Lane ; North Wingfield Parish Council for 16 bungalows of a type suitable for occupation by aged persons ; Eckington Parish Council for a number of bungalows of a type suitable for aged persons ; Killamarsh Parish Council for 20 bungalows of a type suitable for aged persons; Morton Parish Council for dwellings of a type suitable for the occupation by aged persons.

The KIDDERMINSTER Corporation recommends the erection of 50 houses on the Broadwaters estate, and 50 on the Foley Park estate, for rehousing purposes.

Plans passed by the KIDDERMINSTER Corporation : Warehouse, Dixon Street, for Carpet Trades, Ltd. ; four houses, Chester Road, for Mr. H. Harris ; alterations, Peacock Inn, Horsefair, for Kidderminster Brewery Co. ; two houses, Holman Street, for Messrs. T. W. Edwards and Son ; spinning mill, Stourport Road, for Messrs. T. and A. Naylor, Ltd.

THE WALSALL Corporation has approved plans for the construction of an arcade and shops in Park Street, at a cost of £9,950.

EASTERN COUNTIES

The Hundred Houses Society, Ltd., is to build 100 houses in Coldham's Lane, CAMBRIDGE.

Plans passed by the HORNCHURCH U.D.C. : Twenty houses, Oliver Road, for Mr. G. O. Russen ; 42 houses, Southend Road, for Messrs. Baker, Hammond and Laver ; 24 houses, Rainham Road, for Mr. T. Blade ; six houses, MacDonald Avenue, for Mr. W. R. Gorrill ; six houses, MacDonald Avenue, for Mr. J. W. Ambrose ; eight houses, Cromer Road, for Mr. F. O. Russen ; 12 houses, Kenilworth Gardens, for Mr. A. J. Smith ; 24 houses, Rainham Road, for Mr. T. Blade ; 11 houses, Bruce Avenue, for Mr. D. Struckett ; six houses, Arterial Road, for Mr. J. R. Lovett ; two houses, Bedford Gardens, for Messrs. Rawlinson and Iles ; four houses, Hylands Way, for Mr. A. R. Mullenger ; six houses, Suttons Avenue, for Messrs. A. and C. Lawford ; 12 houses, Rainham Road, for Messrs. Baker, Hammond and Laver ; two houses, Brentwood Road, for Mr. W. J. Curtis ; 10 houses, Avenue Road, for Messrs. Meredith and Tilley ; two houses, Harrow Drive, for Messrs. Johnstone and Howe ; three houses, Stanley Road, for Mr. C. A. Tomlinson.

The IPSWICH Corporation has agreed to re-zone land in Sidegate Lane, and Colchester Road, for a shopping centre for Messrs. Goodchild and How.

Plans passed by the YARMOUTH Corporation : Six houses, Middleton Road, Gorleston, for Messrs. H. A. Holmes and Sons, Ltd. ; four houses, Middleton Road, Gorleston, for Mr. E. J. Fuller ; six houses, Victoria Road, Gorleston, for Messrs. E. Moore and Son ; alterations to 45, Caister Road, for Mr. D. C. Rayment ; additions, "Earl Grey" public-house, High Street, Gorleston, for Messrs. Steward and Patteson, Ltd. ; extensions, Kimberley Hotel, for Mr. E. Sharman.

NORTHERN COUNTIES

Plans passed by the BLACKPOOL Corporation : Six houses, Knaresborough Avenue, for Hall Estate Building Co. ; two houses, Dunmail Avenue, for Messrs. Keenan and Yates, Ltd. ; four houses, Bryning Avenue, for Mr. R. H. Cunliffe ; three houses, Highgate, for Mr. H. Welch ; two houses, Stoney Hill Avenue, for Messrs. Midgley and May ; 12 houses, Warbreck Drive, for Mr. H. Dunnill ; 16 houses, Delphine Avenue, for Mr. W. Spencer ; two houses, Maurice Grove, for Messrs. Hill and Davies ; eight houses, Broadway, for Mr. H. Hawkesworth ; two houses, Manchester Road, for Messrs. R. and J. Cardwell ; five houses, Willows Avenue, for Mr. A. A. Holt ; three houses, Boome Street, for Mr. H. Slater ; two houses, Caxton Avenue, for Mr. J. Ridyard ; 38 houses, Rochford Avenue, for Messrs. R. and H. Fletcher, Ltd. ; four houses, Arnott Road, for Mr. G. Worrall ; 34 houses, Riversleigh Avenue, and 60 houses, Red Bank Road, for Messrs. R. Fielding and Son ; two houses, Clinton Avenue, for Messrs. Hogarth and Pollard ; seven houses, St. Luke's Road, for Mr. H. D. Whiteside ; 24 houses, Fleetwood Road, for Messrs. S. Brooks, Ltd. ; 24 houses, Devonshire Avenue, for Mr. W. Aland ; two bungalows, Warley Road, for Warley Estates, Ltd. ; nine houses, Bloomfield Road, for Mr. S. A. Howard ; two houses, Newton Drive, for Mr. N. Rideout ; six houses, Albany Avenue, for Mr. T. Foster ; five houses, Dutton Road, for Mr. L. Hindle ; two houses, St. Anne's Road, for Messrs. Hayes (Blackpool), Ltd.

The CARLISLE Corporation has approved a scheme for dealing with slum areas at a total cost of £124,000.

Plans passed by the STOCKTON-ON-TEES Corporation : Alterations, St. Peter's Parish Hall, for the Rev. J. McGill ; six houses, Darlington Lane, for Mr. C. Crosby ; two houses, North Albert Road, for Mr. G. P. Stainsby ; four houses, Grosvenor Road, for Mr. C. J. Boyd ; two houses, Cumberland Grove, for Messrs. Moorhouse and Barker ; eight houses, Craigweil Crescent, Durham Road, for Mr. C. W. Cummings ; two houses, Westfield Crescent, for Messrs. T. Holt & Co. ; six houses, Green Lane, for Mr. A. Harrison ; 10 houses, Southfield Crescent, for Messrs. R. Blackett & Co. ; extension of pavilion, Victoria football ground, for the Stockton Football and Athletic Co., Ltd. ; extension, Quayside Mission, The Square, Stockton, for Mr. G. P. Stainsby ; new street, junction of Blackett Avenue and David Road, for Messrs. R. Blackett & Co., four houses, Kilburn Road, for Mr. G. Race.

Plans passed by the YORK Corporation : 78 houses, Church Park estate, etc., for Mr. H. Williamson ; conversion, Nunthorpe Hall, Albemarle Road, to flats, for Mr. J. Hetherton ; additions, White Swan Hotel, Pavement, for Mr. C. Walker ; two houses, East Parade, for Mr. C. H. E. Bridgen ; additions, High Sousegate, for Messrs. Hepworth ; additions, Fishergate, for National Glass Works, Ltd. ; two houses, Walney Road, for Mr. T. Caffrey ; shops and offices, Piccadilly, for Messrs. W. Dove and Sons, Ltd. ; 14 houses, Elmfield School estate, for Sir R. Newbald Kay ; two houses, Malton Road, for Mr. F. S. Hidgson ; 16 houses, Temple Avenue, for Messrs. Cowling and Swift ; two houses, Malton Way, for Clifton Lodge Estate Co. ; eight houses, off Malton Road, for Mr. J. W. Maw and Sons ; four houses, Top Lane, Copmanthorpe, for Mr. H. Sidebottom. Plans submitted : 14 houses, Osbalkwick Lane, for Mr. J. N. Dunn.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	ABERDARE ..	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny ..	S. Wales & M.	1 5	1 0¾
A_3	Abingdon ..	S. Counties	1 4	1 0
A	Accrington ..	N.W. Counties	1 5½	1 1½
A_3	Addlestone ..	S. Counties	1 4	1 0
A	Adlington ..	N.W. Counties	1 5½	1 1½
A	Airdrie ..	Scotland	*1 5½	1 1½
C	Aldeburgh ..	E. Counties	1 1½	10¼
A	Altrincham ..	N.W. Counties	1 5½	1 1½
B_3	Appleby ..	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1½
A_3	Atherstone ..	Mid. Counties	1 4	1 0
B_2	Aylesbury ..	S. Counties	1 2½	11
B_1	BANBURY ..	S. Counties	1 3	11¼
B_1	Bangor ..	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley ..	Yorkshire	1 5½	1 1½
B	Barnstaple ..	S.W. Counties	1 3½	11¾
A	Barrow ..	N.W. Counties	1 5½	1 1½
A	Barry ..	S. Wales & M.	1 5½	1 1½
B_1	Basingstoke ..	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley ..	Yorkshire	1 5½	1 1½
A_3	Bedford ..	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley ..	Mid Counties	1 4½	1 0½
B	Bicester ..	S. Counties	1 2	10½
	Birkenhead ..	N.W. Counties	*1 7	1 2¼
A	Birmingham ..	Mid. Counties	1 5½	1 1½
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn ..	N.W. Counties	1 5½	1 1½
A	Blackpool ..	N.W. Counties	1 5½	1 1½
A	Blyth	N.E. Coast	1 5½	1 1½
B_2	Bognor ..	S. Counties	1 2½	11
A	Bolton ..	N.W. Counties	1 5½	1 1½
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth ..	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford ..	Yorkshire	1 5½	1 1½
A_1	Brentwood ..	E. Counties	1 5	1 0¾
A	Bridgend ..	S. Wales & M.	1 5½	1 1½
B_1	Bridgwater ..	S.W. Counties	1 3	11¼
A_1	Bridlington ..	Yorkshire	1 5	1 0¾
A	Brighouse ..	Yorkshire	1 5½	1 1½
A_3	Brighton ..	S. Counties	1 4	1 0
A	Bristol ..	S.W. Counties	1 5	1 0¾
B_3	Brixham ..	S.W. Counties	1 2	10½
A_2	Bromsgrove ..	Mid. Counties	1 4½	1 0½
C	Bromyard ..	Mid. Counties	1 1½	10¼
A	Burnley ..	N.W. Counties	1 5½	1 1½
A	Burslem ..	Mid. Counties	1 5½	1 1½
A	Burton-on-Trent	Mid. Counties	1 5½	1 1½
A	Bury	N.W. Counties	1 5½	1 1½
A	Buxton ..	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE ..	E. Counties	1 4½	1 0½
B_2	Canterbury ..	S. Counties	1 2½	11
A	Cardiff ..	S. Wales & M.	1 5½	1 1½
A	Carlisle ..	N.W. Counties	1 5½	1 1½
B	Carmarthen ..	S. Wales & M.	1 3½	11¾
B	Carnarvon ..	N.W. Counties	1 3½	11¾
A	Carnforth ..	N.W. Counties	1 5½	1 1½
A	Castleford ..	Yorkshire	1 5½	1 1½
B	Chatham ..	S. Counties	1 3½	11¾
B	Chelmsford ..	E. Counties	1 3½	11¾
A_3	Cheltenham ..	S.W. Counties	1 4	1 0
A	Chester ..	N.W. Counties	1 5½	1 1½
A	Chesterfield ..	Mid. Counties	1 5½	1 1½
B_2	Chichester ..	S Counties	1 2½	11
A	Chorley ..	N.W. Counties	1 5½	1 1½
B_2	Cirencester ..	S. Counties	1 2½	11
A	Clitheroe ..	N.W. Counties	1 5½	1 1½
A	Clydebank ..	Scotland	1 5½	1 1½
A	Coalville ..	Mid. Counties	1 5½	1 1½
A_3	Colchester ..	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1½
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett ..	N.E. Coast	1 5	1 0¾
A_2	Conway ..	N.W. Counties	1 4½	1 0½
A	Coventry ..	Mid. Counties	1 5½	1 1½
A_2	Crewe ..	N.W. Counties	1 4½	1 0½
A	Cumberland ..	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1½
A	Darwen ..	N.W. Counties	1 5½	1 1½
B	Deal	S. Counties	1 2½	11
A_3	Denbigh ..	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1½
A	Dewsbury ..	Yorkshire	1 5½	1 1½
B	Didcot ..	S. Counties	1 3½	11¾
A	Doncaster ..	Yorkshire	1 5½	1 1½
B_2	Dorchester ..	S.W. Counties	1 2½	11
A_3	Driffield ..	Yorkshire	1 4	1 0
A_2	Droitwich ..	Mid. Counties	1 4½	1 0½
A	Dudley ..	Mid. Counties	1 5½	1 1½
A	Dundee ..	Scotland	1 5½	1 1½
A	Durham ..	N.E. Coast	1 5½	1 1½
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale ..	S. Wales & M.	1 5	1 0¾
A	Edinburgh ..	Scotland	1 5½	1 1½
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter ..	S.W. Counties	*1 4½	1 0½
B_1	Exmouth ..	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood ..	N.W. Counties	1 5½	1 1½
B_2	Folkestone ..	S. Counties	1 2½	11
A	Frodsham ..	N.W. Counties	1 5½	1 1½
B_2	Frome ..	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1½
B	Gillingham ..	S. Counties	1 3½	11¾
A_2	Gloucester ..	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport ..	S. Counties	1 4	1 0
A_3	Grantham ..	Mid. Counties	1 4	1 0
A_1	Gravesend ..	S. Counties	1 5	1 0¾
A	Greenock ..	Scotland	*1 5½	1 1½
A	Grimsby ..	Yorkshire	1 5½	1 1½
B_1	Guildford ..	S. Counties	1 3	11¼
A	HALIFAX ..	Yorkshire	1 5½	1 1½
A	Hanley ..	Mid. Counties	1 5½	1 1½
A	Harrogate ..	Yorkshire	1 5½	1 1½
A	Hartlepools ..	N.E. Coast	1 5½	1 1½
B	Harwich ..	E. Counties	1 3½	11¾
B_2	Hastings ..	S. Counties	1 2½	11
A_3	Hatfield ..	S. Counties	1 4	1 0
B	Hereford ..	S.W. Counties	1 3½	11¾
A_3	Hertford ..	E. Counties	1 4	1 0
A	Heysham ..	N.W. Counties	1 5½	1 1½
A	Howden ..	N.E. Coast	1 5½	1 1½
A	Huddersfield ..	Yorkshire	1 5½	1 1½
A	Hull	Yorkshire	1 5½	1 1½
A	ILKLEY ..	Yorkshire	1 5½	1 1½
A	Immingham ..	Mid. Counties	1 5½	1 1½
A_3	Ipswich ..	E. Counties	1 4	1 0
B_3	Isle of Wight ..	S. Counties	1 2	10½
A	JARROW ..	N.E. Coast	1 5½	1 1½
A	KEIGHLEY ..	Yorkshire	1 5½	1 1½
B	Kendal ..	N.W. Counties	1 3½	11¾
B	Keswick ..	N.W. Counties	1 3½	11¾
A_2	Kettering ..	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn ..	E. Counties	1 2½	11
A	LANCASTER ..	N.W. Counties	1 5½	1 1½
A_1	Leamington ..	Mid. Counties	1 5	1 0¾
A	Leeds ..	Yorkshire	1 5½	1 1½
A	Leek	Mid. Counties	1 5½	1 1½
A	Leicester ..	Mid. Counties	1 5½	1 1½
A	Leigh	N.W. Counties	1 5½	1 1½
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield ..	Mid. Counties	1 4½	1 0½
A	Lincoln ..	Mid. Counties	1 5½	1 1½
	Liverpool ..	N.W. Counties	*1 7	1 2¼
A_2	Llandudno ..	N.W. Counties	1 4½	1 0½
A	Llanelly ..	S. Wales & M.	1 5½	1 1½
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton ..	Mid. Counties	1 5½	1 1½
A	Loughborough	Mid. Counties	1 5½	1 1½
A_3	Luton	E. Counties	1 4	1 0
A	Lytham ..	N.W. Counties	1 5½	1 1½
A_1	MACCLESFIELD	N.W. Counties	1 5	1 0¾
B	Maidstone ..	S. Counties	1 3½	11¾
A_3	Malvern ..	Mid. Counties	1 4	1 0
A	Manchester ..	N.W. Counties	1 5½	1 1½
A	Mansfield ..	Mid. Counties	1 5½	1 1½
B_1	Margate ..	S. Counties	1 3	11¼
A_3	Matlock ..	Mid. Counties	1 4	1 0
A_1	Merthyr ..	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1½
A_2	Middlewich ..	N.W. Counties	1 4½	1 0½
B_2	Minehead ..	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe ..	N.W. Counties	1 5½	1 1½
A_2	NANTWICH ..	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1½
A	Nelson ..	N.W. Counties	1 5½	1 1½
A	Newcastle ..	N.E. Coast	1 5½	1 1½
A	Newport ..	S. Wales & M.	1 5½	1 1½
A	Normanton ..	Yorkshire	1 5½	1 1½
A_1	Northampton ..	Mid. Counties	1 5	1 0¾
A	North Staffs. ..	Mid. Counties	1 5½	1 1½
A	North Shields ..	N.E. Coast	1 5½	1 1½
A_2	Norwich ..	E. Counties	1 4½	1 0½
A	Nottingham ..	Mid. Counties	1 5½	1 1½
A	Nuneaton ..	Mid. Counties	1 5½	1 1½
A_3	OAKHAM ..	Mid. Counties	1 4	1 0
A	Oldham ..	N.W. Counties	1 5½	1 1½
A_3	Oswestry ..	N.W. Counties	1 4	1 0
A_2	Oxford ..	S. Counties	1 4½	1 0½
A	PAISLEY ..	Scotland	*1 5½	1 1½
B_3	Pembroke ..	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1½
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth ..	S.W. Counties	*1 5½	1 1½
A	Pontefract ..	Yorkshire	1 5½	1 1½
A_1	Pontypridd ..	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth ..	S. Counties	1 4	1 0
A	Preston ..	N.W. Counties	1 5½	1 1½
A	QUEENSFERRY	N.W. Counties	1 5½	1 1½
A_2	READING ..	S. Counties	1 4½	1 0½
B	Reigate ..	S. Counties	1 3½	11¾
A_3	Retford ..	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale ..	N.W. Counties	1 5½	1 1½
B	Rochester ..	S. Counties	1 3½	11¾
A_1	Ruabon ..	N.W. Counties	1 5	1 0¾
A	Rugby ..	Mid. Counties	1 5½	1 1½
A_3	Rugeley ..	Mid. Counties	1 4	1 0
A	Runcorn ..	N.W. Counties	1 5½	1 1½
A_2	ST. ALBANS ..	E. Counties	1 4½	1 0½
A	St. Helens ..	N.W. Counties	1 5½	1 1½
B_3	Salisbury ..	S.W. Counties	1 2	10½
A_1	Scarborough ..	Yorkshire	1 5	1 0¾
A	Scunthorpe ..	Mid. Counties	1 5½	1 1½
A	Sheffield ..	Yorkshire	1 5½	1 1½
A	Shipley ..	Yorkshire	1 5½	1 1½
A_2	Shrewsbury ..	Mid. Counties	1 4½	1 0½
A_2	Skipton ..	Yorkshire	1 4½	1 0½
A_3	Slough ..	S. Counties	1 4	1 0
A_2	Solihull ..	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport ..	N.W. Counties	1 5½	1 1½
A	S. Shields ..	N.E. Coast	1 5½	1 1½
A_2	Stafford ..	Mid. Counties	1 4½	1 0½
A	Stockport ..	N.W. Counties	1 5½	1 1½
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1½
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1½
B	Stroud ..	S.W. Counties	1 3½	11¾
A	Sunderland ..	N.E. Coast	1 5½	1 1½
A	Swadlincote ..	Mid. Counties	1 5½	1 1½
A	Swansea ..	S. Wales & M.	1 5½	1 1½
A_3	Swindon ..	S.W. Counties	1 4	1 0
A_1	TAMWORTH ..	N.W. Counties	1 5	1 0¾
B	Taunton ..	S.W. Counties	1 3½	11¾
A	Teesside Dist...	N.E. Counties	1 5½	1 1½
A_3	Teignmouth ..	S.W. Coast	1 4	1 0
A	Todmorden ..	Yorkshire	1 5½	1 1½
A_1	Torquay ..	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall ..	Mid. Counties	1 5½	1½
A	Tyne District ...	N. E. Coast	1 5½	1½
A	WAKEFIELD	Yorkshire	1 5½	1 1½
A	Walsall ..	Mid. Counties	1 5½	1 1½
A	Warrington ..	N.W. Counties	1 5½	1 1½
A_1	Warwick ..	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1½
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby ..	Yorkshire	1 4½	1 0½
A	Widnes ..	N.W. Counties	1 5½	1 1½
A	Wigan ..	N.W. Counties	1 5½	1 1½
B_1	Winchester ..	S. Counties	1 3	11¼
A_3	Windsor ..	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1½
A_2	Worcester ..	Mid. Counties	1 4½	1 0½
A	Worksop ..	Yorkshire	1 4	1 0
A_1	Wrexham ..	N.W. Counties	1 5	1 0¾
A_3	Wycombe ..	S. Counties	1 4	1 0
B_1	YARMOUTH ..	E. Counties	1 3	11¼
B_1	Yeovil ..	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1½

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* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	,,		7	6
Building Sand	,,		7	9
Washed Sand	,,		8	9
2" Broken Brick	,,		8	3
¾" ,, ,,			11	6
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	9	2	6
,, Wirecuts	,,	8	2	6
,, Brindles	,,	7	6	6
,, Bullnose	,,	9	14	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	8	8	0
Luton Facings	,,	8	0	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		19	0
,, ⅞"	,,	1	1	6
,, 1"	,,	1	3	6
,, 1¼"	,,	1	7	6
,, 1½"	,,	1	12	0
Deal matchings ⅝"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/-	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1½"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	,,	8	6
,, ,, ⅜"	,,	8	3
,, ,, ½"	,,	8	0
,, ,, ⅝"	,,	7	6
,, ,, ¾"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	,,	5	0	8	6
Boots	,,	3	3	4	5
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	1	0
,, drawn pipes	,,		18	0
,, soil pipe	,,	1	5	0
,, scrap	,,		13	6
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			10½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2¾
,, ,, 26 oz. ,, ,, ,,	,,					3¼
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
¼" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2¼
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
,, to reduce levels n/e 5' 0" deep and cart away	Y.C.		8	6
,, to form basement n/e 5' 0" deep and cart away	,,		9	0
,, ,, 10' 0" deep and cart away	,,		9	6
,, ,, 15' 0" deep and cart away	,,		10	0
If in stiff clay	add ,,		2	6
If in underpinning	,, ,,		4	0
Digging, return, fill and ram	,, ,,		4	0
Planking and strutting to sides of excavation	F.S.		1	0
,, ,, to pier holes	,,			5
,, ,, to trenches	,,			5
,, ,, extra, only if left in	,,			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	,,	1	6	0
,, ,, ,, (4-2-1)	,,	1	12	6
,, ,, underpinning	,,	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4"		6"	
		s.	d.	s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
,, junctions		3	9	4	6
Gullies and grating	,,	16	6	18	0
Cast iron drains and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
,, ,, in cement	,,	29	15	0
,, Stocks in cement	,,	35	15	0
,, Blues in cement	,,	52	0	0
Extra only for circular on plan	,,	2	0	0
,, backing to masonry	,,	1	10	0
,, raising on old walls	,,	2	0	0
,, underpinning	,,	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	,,			5½
,, ,, ,, red brick facings and pointing	,,			11
,, ,, ,, blue brick facings and pointing	,,		1	4
,, ,, ,, glazed brick facings and pointing	,,		3	6
Tuck pointing	,,			7
Weather pointing in cement	,,			3½
Slate dampcourse	,,			10
Vertical dampcourse	,,		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	,,	6	9
¾" paving or flat	,,	4	0
1" paving or flat	,,	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	,,		2
Rounded angle	,,		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including alll abours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	,,		13	6
Artificial stone and do.	,,		13	0
York stone templates, fixed complete	,,		10	6
,, thresholds	,,		13	6
,, sills	,,	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	,,	3	7	0
Do., 24" × 12"	,,	3	17	0
Westmorland slating, laid with diminished courses	,,	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	,,	3	0	0
Do., all as last, but of machine-made tiles.	,,	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	,,	4	6	6
,, ,, ,, ,, ,, (green)	,,	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
,, to stanchions	,,			8
,, to staircases	,,		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	,,		4	6
,, ,, roofs	,,		6	6
,, ,, trusses	,,		7	6
,, ,, partitions	,,		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" ,, ,, ,, ,,	,,	1	17	6
1¼" ,, ,, ,, ,,	,,	2	3	0
¾" × 2" fir battening for Countess slating	,,		9	6
Do. for 4" gauge tiling	,,		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
,, ,, ,, 2 ,,	,,		2	9
,, ,, ,, 3 ,,	,,		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" ,, ,, ,, ,, ,,	,,		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	,,	2	12	6
1½" do.	,,	2	19	0
1" deal moulded skirting, fixed on, and ncluding grounds plugged to wall	F.S.		1	6
1¼" do.	,,		1	11

CARPENTER AND JOINER—*continued*

		s.	d
1½" deal moulded sashes of average size	F.S.	1	11
2" ,, ,,	,,	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1½" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	3	9
2" ,, ,, ,,	,,	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" ,, ,, ,,	,,	2	8
1½" ,, but moulded both sides	,,	2	4
2" ,, ,, ,,	,,	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" ,, ,,	,,	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	2	6
1½" deal moulded wall strings	,,	2	1
1½" ,, outer strings	,,	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" ,, ,,	,,	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	,,	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	,,		19	6
Do. stanchions with riveted caps and bases and do.	,,		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	,,		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	6
Do. in flashings		1	18	0
Do. in covering to turrets, etc.	,,	2	4	0
Do. in soakers	,,	1	10	0
Labour to welted edge	F.R.			3½
Open copper nailing	,,			3½
Close ,, ,,	,,			4½

		½"		¾"		1"		1¼"		2"		4"	
		s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Lead service pipe and fixing with pipe hooks	F.R.	1	0	1	2	1	5	2	1	3	0	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	3
Do. to stop ends			6½		8		9		11	1		—	
Boiler screws and unions	,,	3	3	3	9	5	0	8	0	—		—	
Lead traps	,,	—		—		—		6	3	8	9	—	
Screw down bib valves	,,	6	9	9	6	11	0	—		—		—	
Do. stop cocks	,,	9	0	11	0	14	6	20	6	47	0	—	

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	,,	1	6
Do. outlets	,,	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	,,	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	,,		3	6
Lathing with sawn laths to ceilings	,,		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	,,		1	9
Do. vertical	,,		2	3
Rough render on walls	,,		1	4
Render, float and set in lime and hair	,,		2	0
Render and set in Sirapite	,,		2	2
Render, backing in cement and sand, and set in Keene's cement	,,		3	1
Extra, only if on lathing	,,			4
Keene's cement, angle and arris	F.R			6
Arris	,,			2
Rounded angle, small	,,			3
Plain cornices in plaster, including dubbing out, per 1" girth	,,			1½
1" granolithic pavings	Y.S.		3	6
1½" ,,	,,		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	,,		17	6
9" × 3" ,, ,, ,, ,,	,,	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

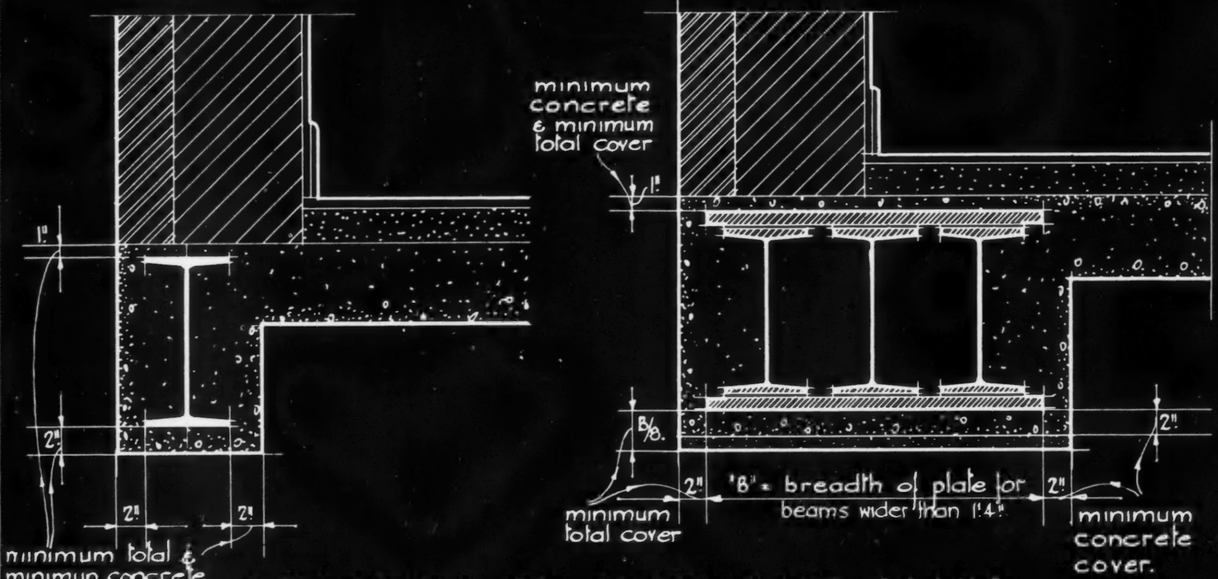
		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	,,		8½
Arctic glass and glazing with putty	,,	1	1
Cathedral glass and do.	,,	1	2
Glazing only, British polished plate	,,		7
Extra, only if in beads	,,		2
Washleather	F.R.		4

PAINTER

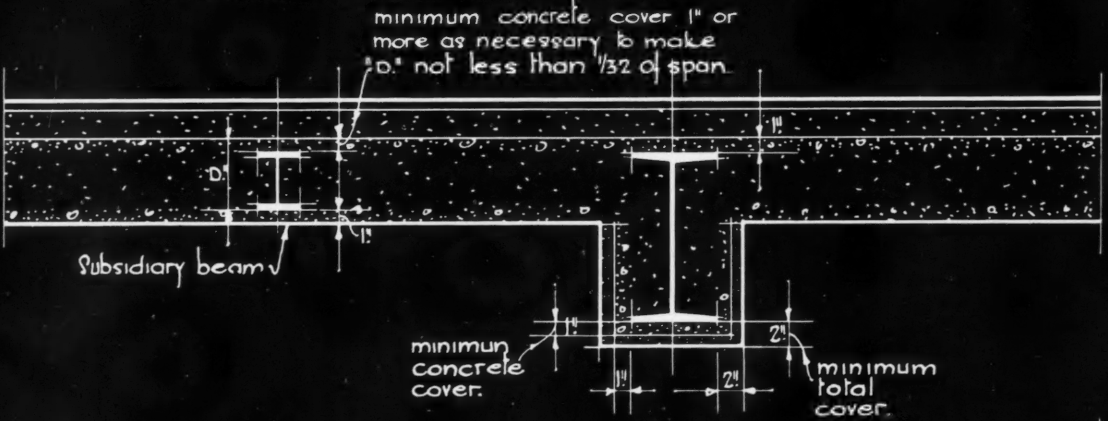
		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	,,		9
Do. with washable distemper	,,	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3	3
Do. on woodwork	,,	3	6
Do. on steelwork	,,	3	0
Do. and brush grain and twice varnish	,,	5	6
Stain and twice varnish woodwork	,,	1	11
Stain and wax-polish woodwork	,,	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	,,	2	9

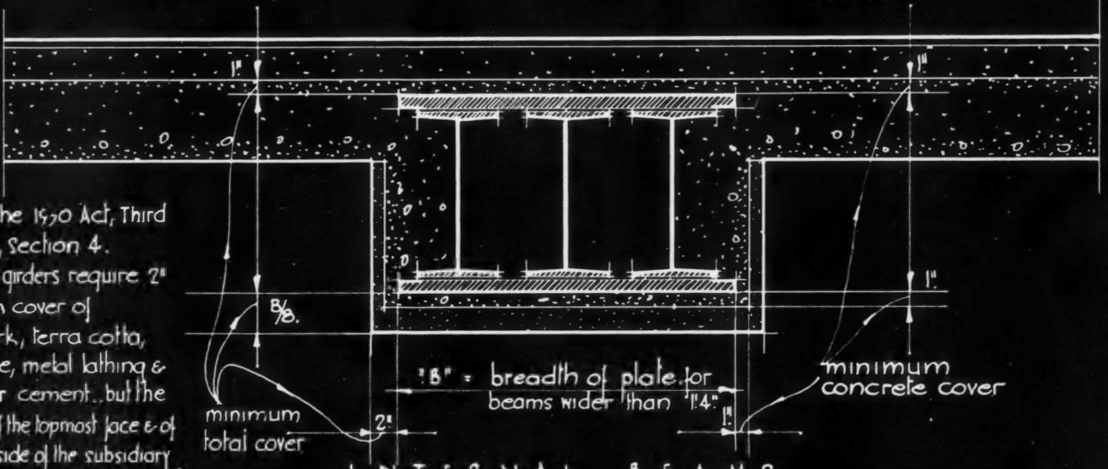
2

[Under the 1930 Act: Third Schedule, Section 3. external girders require a casing of 4" minimum of brickwork, terra cotta, concrete, stone, tiles, or other incombustible materials properly bonded and secured.. but the casing to the underside of girders & the edges of the flanges, plates & angles may be not less than 2"]


minimum concrete & minimum total cover
1"
1"
2"
2"
2"
B/8.
2"
'B' = breadth of plate for beams wider than 1'4"
2"
2"
minimum total cover
minimum concrete cover.
minimum total & minimum concrete cover

EXTERNAL OR PARTY WALL BEAMS.
COVER AS REQUIRED BY L.C.C. WAIVERS 1932 SUB SECTION 12C.


minimum concrete cover 1" or more as necessary to make "D." not less than 1/32 of span.
1"
D.
1"
Subsidiary beam
1"
2"
minimum concrete cover.
1"
2"
minimum total cover.


1"
1"
B/8.
1"
"B" = breadth of plate for beams wider than 1'4"
minimum total cover
2"
1"
minimum concrete cover

(Under the 1930 Act, Third Schedule, Section 4. Internal girders require 2" minimum cover of brickwork, terra cotta, concrete, metal lathing & plaster or cement.. but the casing of the topmost face & of the underside of the subsidiary joists may be not less than 1".)

INTERNAL BEAMS
COVER AS REQUIRED BY L.C.C. WAIVERS 1932. SUBSECTION 12C.

NOTE: See the clauses of the Act for the application of the Waivers or the Act.

DIAGRAMS OF REQUIREMENTS OF THE L.C.C. WAIVERS 1932 : STRUCTURAL STEELWORK.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON. W.C.1.

INFORMATION SHEETS

• 41 •

L. C. C. WAIVERS : II

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THIS week we publish the second and third of the four Information Sheets devoted to the requirements of the L.C.C. Waivers, 1932. The fourth of these will be published next week, together with a sheet showing methods of setting out of brick coursing, etc.

The following is a full list of the subjects previously issued :—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units : 1.
13. Apr. 12—Lavatory Units : 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs : 1.
23. June 29—Concrete Stairs : 2.
24. July 6—Pressed Steel Stairs : 1.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs : 2.
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes : 1.
30. Aug. 17—Lay-out of Wardrobes : 2.
31. Aug. 24—Common Sizes Miscellaneous.
32. Aug. 24—Electric Lighting : I.
33. Aug. 31—Electric Lighting : II.
34. Aug. 31—Electric Lighting : III.
35. Sept. 7—Electric Lighting : IV.
36. Sept. 7—Vacuum Cleaning Systems.
37. Sept. 14—Steelwork : I.
38. Sept. 14—Steelwork : II.
39. Sept. 21—Steelwork : III.
40. Sept. 21—L.C.C. Waivers : I.

Subsection 14 & 15

GENERAL :

Materials: brickwork, masonry, hollow blocks, concrete, or combinations of them being properly bonded .. or other materials which provide adequate grade of fire resistance and adequate strength and durability and shall be so built as to be properly secured to the steel frame.

Height : maximum height for any panel between supporting beams to be 25'0".

Subsection 17.

PANEL WALLS OF ONE THICKNESS :

Materials, solid brickwork, concrete, or hollow blocks

lesser clear span horizontally or vertically	minimum thickness exclusive of any finishes
0. to 13'0"	8½"
13'1" " 16'0"	10½"
16'1" " 19'0"	12½"
19'1" " 22'0"	14½"
22'1" " 25'0"	16½"
25'0"	the maximum height of 25'0" will be the lesser clear span giving 16½" thickness.

Subsection 18.

REINFORCED CONCRETE PANEL WALLS :

Materials: 1:2:4 mix and steel reinforcement.

Thickness: 4" exclusive of any finishes (minimum).

Construction: reinforcement shall be adequately anchored to the steel pillars & beams on four sides.

Subsection 19.

FACED PANEL WALLS :

Materials : brick or concrete faced with terra-cotta, faience or stone
hollow block faced with brick, terra-cotta, faience or stone

lesser clear span horizontally or vertically	minimum thickness exclusive of any finishes
0 to 16'0"	13"
16'1" " 19'0"	15"
19'1" " 22'0"	17"
22'1" " 25'0"	19"
25'1"	the maximum height of 25'0" will be the lesser clear span giving 19" thickness.

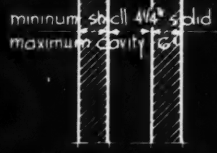
Subsection 20.

CAVITY PANEL WALLS :

Materials : concrete, brickwork, stonework or combinations thereof
ties to be substantial rustresisting design.
2 ties per sq yd in walls with 3" cavity
3 ties per sq yd in walls with 4½" cavity
4 ties per sq yd in walls with 6" cavity

height × width = maximum area of any panel, 200 sq ft.
maximum height 25'0".
lesser clear span not more than 13'0".

MINIMUM THICKNESS OF SHELLS IN CAVITY WALLS EXCLUSIVE OF FINISHES



PERMISSIBLE HEIGHT FOR CAVITY WALLS

height ×	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5
width.	8	8·4	8·7	9·1	9·5	10	10·5	11·1	11·8	12·5	13·3	14·3	15·4	16·7	18·2	20.	22·2	25.	28·6	33·4	40.

N.B. the dimensions 15'3"×13'1" to 13'1"×15'3" are not permitted.

Subsection 22

PARTY WALLS

Materials : solid brickwork

minimum thickness 13". maximum height (i.e. max. spacing of beams). 17'4".

DIGEST OF REQUIREMENTS OF THE L.C.C. WAIVERS 1932 : STRUCTURAL STEELWORK

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

• 42 •

L.C.C. WAIVERS : III

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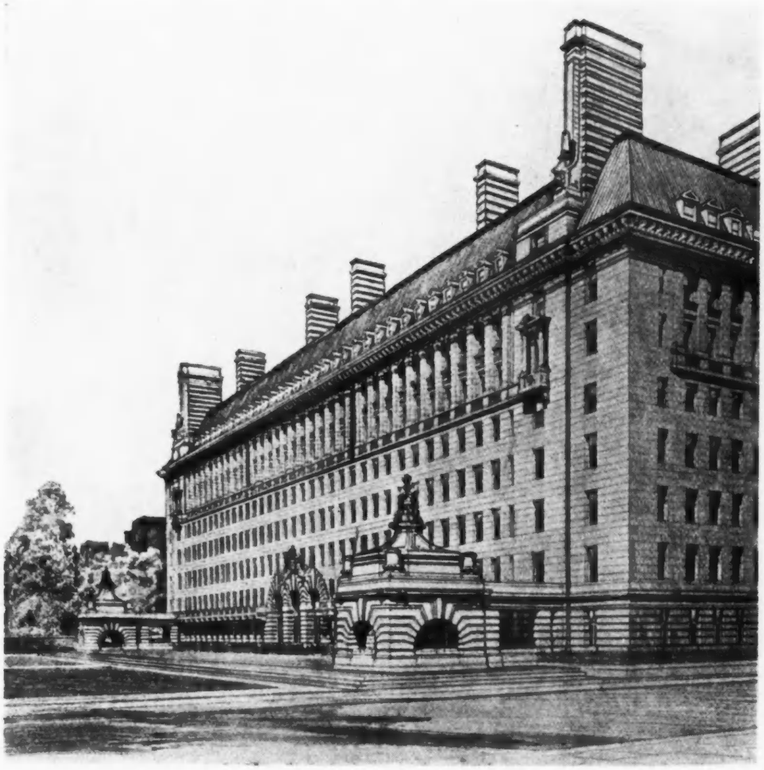
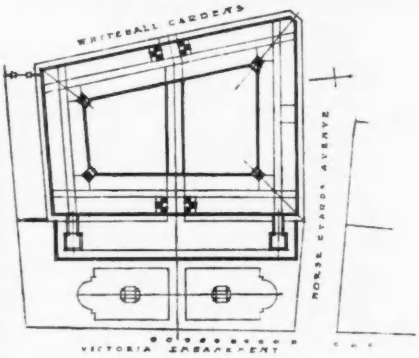
FOR a list of the Information Sheets previously issued, see the other Sheet accompanying this issue.

GOVERNMENT OFFICES

VINCENT HARRIS'S WHITEHALL DESIGN

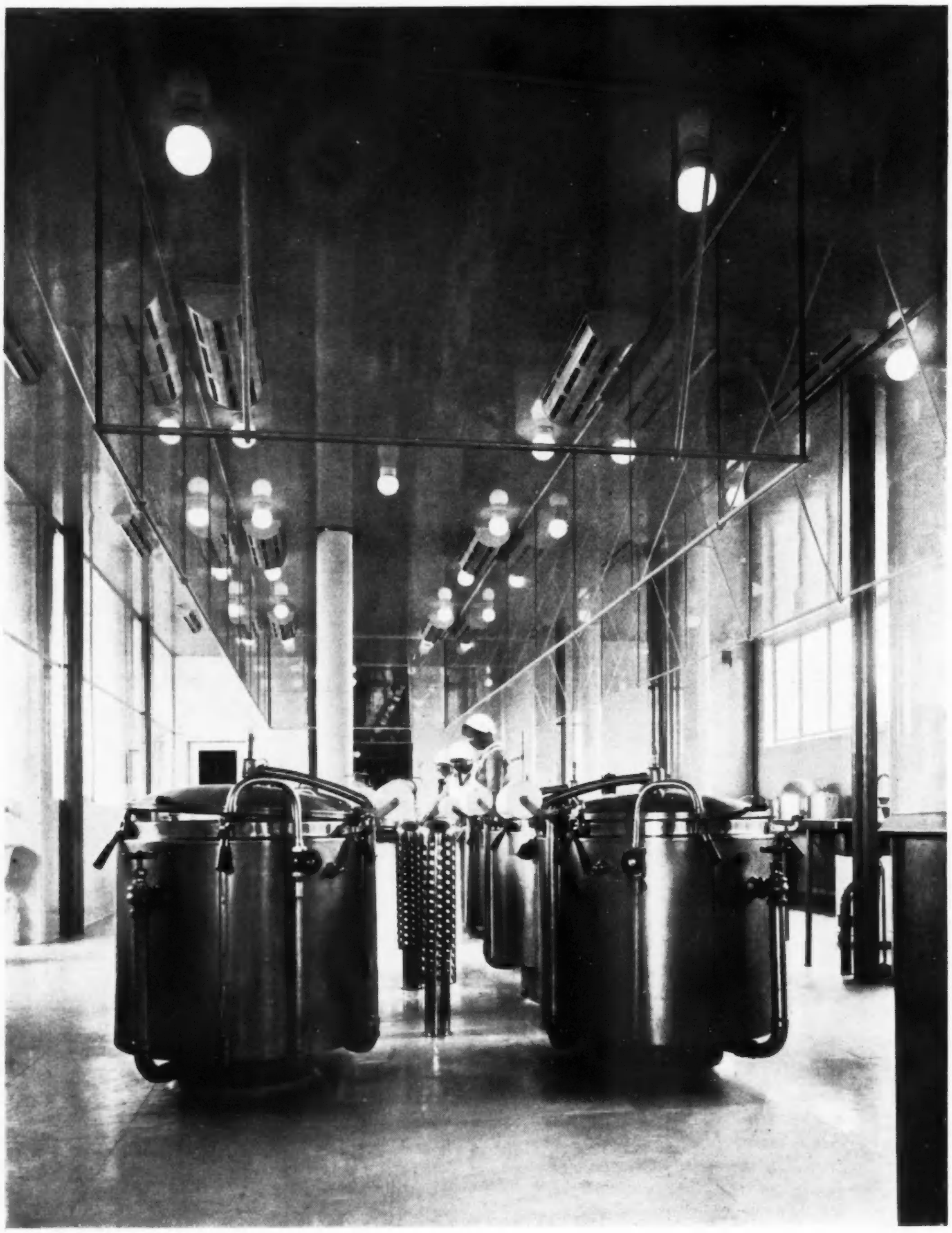




THIS is Mr. Vincent Harris's winning design in the competition, held in 1914-1915, for a new block of Government Offices in Whitehall. There was a preliminary sketch competition as a result of which ten architects were selected to take part in the final competition. This was won by Mr. Vincent Harris, but the whole project was immediately abandoned owing to war-time circumstances.

A new competition is now to take place (as announced in our news columns last week and further referred to this week) also confined to ten competitors who are this time to be nominated by the President of the R.I.B.A., and limited to architects under 55 years of age.

This latter regulation eliminates Mr. Vincent Harris from the new competition.



KITCHEN

The kitchen in the Tuberculosis Sanatorium at Paimio, Finland, designed by Alvar Aalto. The purpose of the hanging glass screens, arranged in three series, is to prevent the spread of smells and gases. The Sanatorium is further illustrated on pages 420-423 of this issue.

720.5 v.78 pt.2

THE REGISTRATION COUNCIL AND THE ARCHITECTURAL SOCIETIES

LAST week we published the following official statement from the Architects' Registration Council concerning the new Institute of Registered Architects :—

> At the meeting of the Architects' Registration Council of the United Kingdom held yesterday (September 25), a letter from the President of the recently-formed Institute of Registered Architects asking for co-operation and support was read and considered. The Council resolved that the request be not acceded to on the grounds that the new Institute could not advance the interests of the architect as a Registered person in any matter that is not already the concern of the Council and could only add to the financial charge on the architectural profession without any commensurate advantage.

A reply to this statement, by Sir Edwin Lutyens, the President of the new Institute, appears on page 418. Sir Edwin Lutyens, in his letter, says :—

> After a lapse of several weeks, the Registration Council now implies that it, and it alone, is all-sufficient for the purpose of protecting and advancing the interests of the Registered architect. If that be a fact, it follows that all the existing professional architectural bodies are unnecessary and that it is a waste of money for a Registered architect to belong to any of them.

On Tuesday last the following further communication was received from the Registration Council :—

> From the information available to the Council it appeared to them that the *raison d'être* of the Institute of Registered Architects was the advancement of the interests of the architect as a registered person, in the main, by the promotion of an Amending Act and the establishment of a Code of Professional Conduct.
>
> In the opinion of the Council, which is representative of all architectural and allied interests, whether associated or not, those of architects as registered persons are the Council's concern, and they alone possess adequate powers for the advancement of such interests.
>
> In pursuance of these interests the Council at an early stage in its existence appointed an Amending Act Committee which has considered all the proposals for the amendment of the Act which have come to the Council from those architectural associations represented on it and from any other quarter.
>
> The report of the Committee has been made, considered, and approved by the Council and an Amending Bill is being drafted.
>
> It must be clear that no such Bill can have any chance of success which does not meet with the approval of the Council, and in view of the action which the Council is taking, no similar action by any other body appears to be required.
>
> On the question of a Code of Professional Conduct this again is a responsibility of the Council and a duty of its Discipline Committee.
>
> The Council alone can grant admission to the Register and the Council alone can remove from the Register. That being so it is clear that no Code of Professional Conduct formulated by any other body can be effective in determining whether an architect is to remain a registered person or not.
>
> It is clear from the above statement that in respect of both these matters, which appear to be the main ground upon which the Institute of Registered Architects is established, it has no adequate powers to pursue them, and they are already being adequately dealt with by the Architects' Registration Council.
>
> There is a further matter. The Architects' Registration Council from its inception has been concerned that matters arising out of Registration should be dealt with at the least possible expense to the profession. The Registration fee was therefore fixed at the low sum of 6s. 8d.
>
> The Council, with the most rigid economy, aims at keeping its administrative expenses below £2,000 per year. On the present Registration fee, in view of the fact that half of the income of the Council is to be devoted to education, this requires a membership of 12,000.
>
> At the present time the membership, including applications not yet dealt with, does not exceed 7,500, and it is not likely to reach more than 10,000 by the end of the year, which would give the Council a sum of not more than £1,666 to devote to its administrative work. On the other hand, the Institute of Registered Architects aiming at the inclusion of all registered persons, have fixed fees, calculated on a membership of 10,000 to produce an income of from £10,000 to £12,000 a year.
>
> Under these circumstances the Council felt that it could not with any propriety give support to a body which proposes to do the work of the Council without possessing its powers, and at a cost to the profession of some three times the amount which the Council estimates need be required.
>
> The Council are of the opinion that there is no necessity for an architect, paying a registration fee of 6s. 8d. per annum to the Architects' Registration Council, to pay a further fee of one guinea or two guineas per annum to another body to secure or advance his interests as a Registered Person.

Many questions have been put to the Registration Council. There are those published in leading articles in our issues for August 10 and August 31 respectively ; there are those asked by Sir Edwin Lutyens. Most of these questions remain unanswered by the Registration Council.

However, the riddle as to whether the Registration Council can assume all the responsibilities of any existing architectural society is perhaps not so extraordinary or insoluble as might be supposed. In fact, it appears that the mystery might be considered insoluble for the very reason that should cause it to be regarded as easy of solution.

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Buildable
Parl.
London

NOTES & TOPICS

AN AALTO STORY

I have been told a story about Alvar Aalto, the Finnish architect and the Fourth International Congress of Modern Architecture, held in Athens in August last.

*

Aalto is too busy with the mere humdrum practice of modern architecture to share the celebrity thrust upon those great ones who prefer theorizing about it—which explains why he only joined the Congress half-way through its labours.

*

While speeding from Finland, partly by air and partly by train, he discovered his passport lacked several indispensable transit visas. As a result he found himself forcibly transferred at Budapest to another, but far more unanimous, international congress, the Boy Scout Jamboree.

*

Once safely in the Balkans, he succeeded in solving the frontier difficulties by the simple formula "I only travel with pounds sterling."

*

Arriving late one burning afternoon in Athens he flung himself into the first taxi, shouting "The Acropolis!" (No doubt he expected to find its latest "discoverer," M. Le Corbusier, still poised lonely as a cloud on a broken column expounding his revolutionary gospel of "light, air, and space" to crowds of ecstatic Hellenes.) The taxi drove Aalto straight to "The Acropolis"—a large "Palace Hotel," with h. and c. water in every room, lifts to all floors, American bar, etc.

*

Polyglot expletives and a menacing finger at a dominant silhouette on the horizon eventually enabled him to reach the hotel's less exuberantly architectural namesake.

*

At the Beulé Gate he met a belated Jugoslav delegate to the Congress, to whom he told his experience. This philosopher pointed out how, thanks to the gratifying spread of Culture, an Acropolis now exists in every city boasting a seven-figure population; but that the name has come to signify rather different types of building to different nations.

*

"In Chicago," he explained, "'The Acropolis' would obviously be a Movietone Palace, where Greek meets Neo-Greek. In Berlin, a ponderous *Gründezeit*-Renaissance academy housing half-a-dozen enormously learned societies. In Paris, an obscure Second Empire café in a quiet bourgeois quarter. In Buenos Aires, a Beaux-Arty communal establishment of a somewhat specifically Latin kind. In Milan, a functionalist confetti factory. In Barcelona, a music-hall with an *art-nouveau* façade of stylized mussel-shells in pink cement. In Boston (Mass.) the Mormon-Modernistic skyscraping bethel of a crank religion."

*

"And what would it be in London?" asked Aalto, who has a morbid interest in English idiosyncracies.

*

"Oh, in London there is certainly a lace-curtained 'Parthenon' boarding-house in some now shabby Regency terrace behind one of the principal stations. In Glasgow, of course, it would be a temperance institute of architecturally amorphous Sabbatarian greyness where 'all are heartily welcome.'"

*

In point of fact, London can also boast a "Parthenon," which, though eminently architectural, is only so in a literary sense: the widely-read organ of the Incorporated Institute of Architects and Surveyors.

*

ANOTHER GOOD PLAN GONE WRONG

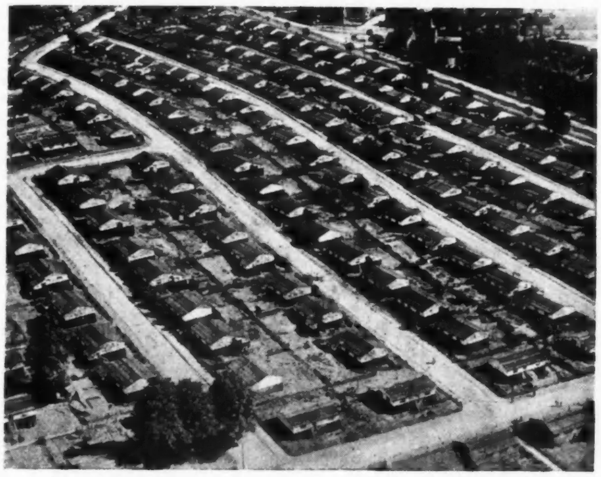
So many architects have said how sorry they were that the Empire Marketing Board has closed down, that I began to think that, if I could take their views as an index of professional opinion generally throughout the country, perhaps some organized protest would be made to unplanning politicians. I was quite optimistic about this until I discovered the chief reason for their regrets.

*

"What a pity there won't be any more of those posters," was always the main—and often the only—reason.

*

The passing of a fine plan for research work in the darkest and most desperate problem of this troubled century; the problem of distribution, was forgotten even



An odd survival in a London suburb. This little-known bungalow town near Eltham was hastily erected during the war to house munition workers. It is still occupied.

if it was ever apprehended. And I began to understand why the E.M.B. has been jettisoned.

*

If one of the few professional classes which has been trained to think in terms of plan could only see one detail on the façade of a magnificent economic structure, it was unreasonable to expect those who govern us to see anything at all.

*

In 1901, G. Lowes Dickinson wrote: "To be a Member of Parliament is, it would seem, a profession in itself; and the qualities, intellectual and moral, which open the door to a public career appear to be distinct from, and even incompatible with, those which contribute to public utility."

*

The ending of the Empire Marketing Board is just another of the countless thousands of proofs we have been given of the profound and enduring truth of that statement.

*

THE ARCHITECTURE OF FUNK

H. G. Wells, dealing with the future in a manner both ponderous and depressing in *The Shape of Things to Come*, predicts the return of fortification. "The world," he writes, "which had been far too stupid to realize in 1930 that the direct way out of its economic difficulties lay in the modernization and rebuilding of its houses, set itself, in a state of war panic after 1942, to as complete a revision of its architecture in the face of bombs and gas as its deepening impoverishment permitted."

*

Vast protecting roofs crushed cities into squat ant-hills. The "tendency of architectural design was to crouch."

*

Several years ago* C. W. R. Nevinson wrote an article in the JOURNAL on air-raid architecture, in which he made similar predictions at a time when the national insanity of war seemed far more remote than it does today.

*

I am afraid that I take the view of the major pessimists, like Olaf Stapledon, and believe that after another large-scale war the starving survivors will live among ruins that they are incapable of repairing.

*

The end of twentieth-century architecture may be wattle and daub.

*

SQUASH RACQUETS

On Monday evening I saw Lord Melchett formally open the new squash racquets club in Thames House, Millbank, and enjoyed the exhibition matches given by some well-known players.

*

Five courts are at present available, and the amenities of the club include a lounge with snack bar, changing rooms and shower baths, a drying room for clothes, security boxes for the storing of valuables while playing, and a shop for the sale of gear. There is also a fully-licensed restaurant and a golf school. Sir Frank Baines was the architect.

*

I am told that there are only two other squash racquets clubs in Central London open to the public. One is in Bush House, the other in the Great Eastern Hotel.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, October 5

ROYAL ACADEMY, Burlington House, Piccadilly, W.1. "Modern Methods of Examining Pictures." By Professor A. P. Laurie. 4 p.m.

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. Visit to slum clearance schemes. Birmingham and Bournville (October 5 and 6).

HOUSING EXHIBITION. At the Kelvin Hall, Glasgow. Until October 28.

Friday, October 6

ROYAL ACADEMY OF ARTS, Burlington House, Piccadilly, W.1. "Modern Pigments: Their Proper Selection and Use." By Professor A. P. Laurie. 4 p.m.

TOWN PLANNING INSTITUTE. At Cardiff. Fifteenth Annual Country Meeting. Until October 9.

Saturday, October 7

Sunrise 7.10 a.m. Sunset 6.25 p.m.

Tuesday, October 10

ST. PAUL'S ECCLESIOLOGICAL SOCIETY. At the R.I.B.A., 9 Conduit Street, W.1. "The English Parish Church from the Reformation to the Civil War." By Sir C. Nicholson, Bart., M.A., F.R.I.B.A. 8 p.m.

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. London and District Branch. At the Borough Polytechnic, Borough Road, S.E.1. "Public Baths Engineering Equipment and Design." By E. Shutt (Jnr.).

ILLUMINATING ENGINEERING SOCIETY. At the Lighting Service Bureau, 2 Savoy Hill, W.C.2. Presidential address and a report on progress in Illuminating Engineering. 6.30 p.m.

Wednesday, October 11

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Liverpool and District Branch. At the Grenville Café, Tithebarn Street, Liverpool. "Convectors and Unit Heaters." By H. Cockram. 7.30 p.m. Birmingham and District Branch. At the Chamber of Commerce, 95 New Street, Birmingham. "Air Conditioning in Theatres." By J. W. Cooling, A.M.I.MECH.E. 6.30 p.m.

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. Second of twenty-four lectures on the History of Architecture. By Sir Banister Fletcher, PP.R.I.B.A. 6.30 p.m.

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* In THE ARCHITECTS' JOURNAL for January 13, 1926—ED., *A.J.*

NEWS

◆

POINTS FROM THIS ISSUE

The largest exhibition hall to be built in England will contain a swimming pool *409*

The reclaiming of the river bank on the south side of the Thames—which would not involve the demolition of one existing house—would entirely alter the aspect of this area *410*

Although no adjudication has been made, the competition drawings have been the subject of at least one lecture *410*

At least 412,500 new houses are required in the fourteen cities dealt with in our Slum Survey if no one is to live in an insanitary house, or at over $1\frac{1}{2}$ per room *428*

Walls fabricated in the factory *429*

◆

BUILDING AND TRADE

The improvement in the unemployment position of the building, allied and dependent industries since the commencement of the campaign of the Special Committee for Public Relations of the Building Industries National Council in January, noted last week, has had marked and widespread effects on other industries, particularly those catering for the home market.

The latest improvement recorded is an increase in the cash value of retail sales in August, 1933, as compared with August, 1932. In the earlier months of this year the increase in the quantity of goods sold as a result of the increased purchasing power of the wage-earners in the building industries was compensated, partly by falling prices, and partly by the fact that employment was still at a lower level than last year. The effect of increasing employment is now manifest. In August retail trade showed its first increase since the "economy" campaign dealt the building industries such a blow in 1931. The stimulus to national economic welfare of increasing activity in the building industries must continue.

ERICH MENDELSOHN TO PRACTICE IN ENGLAND

We understand that Erich Mendelsohn, the German architect, has applied for a permit to stay here and to be allowed to practice in this country. He has also been invited to lecture at a joint meeting of the Manchester Society of Architects, the Institute of Builders and the Royal Manchester Institution, to be held in Manchester in February next.

NEW GOVERNMENT OFFICES IN WHITEHALL

A definite step towards the erection of new Government offices in Whitehall, on the site of Montagu House and Whitehall Gardens, and on Calton Hill, Edinburgh, has been taken by the First Commissioner of Works, Mr. Ormsby-Gore.

As announced in our last issue, Sir Giles Gilbert Scott, R.A., President of the R.I.B.A., has been asked by the First Commissioner to compile a list of ten architects, English and Scottish, from whom one will be selected to design the building in Whitehall, and another the building in Edinburgh. The list will be submitted to a selection committee comprising Mr. Ormsby-Gore (First Commissioner of Works), who will act as chairman; Sir Richard Allison, F.R.I.B.A. (Chief Architect, H.M. Office of Works); the Earl of Crawford and Balcarres (Chairman of the Royal Fine Art Commission); Sir William Llewellyn (President of the Royal Academy) and Sir Giles Gilbert Scott (President of the R.I.B.A.). This committee will choose the designer for the London building; but the architect for its fellow in Edinburgh will be selected from the same list by a different committee.

One condition laid down by the First Commissioner is that the nominated architects shall be under 55 years of age. "The reason for this," according to an official of the Office of Works, in a statement in a contemporary, "lies in the length of time that may elapse before the work is completed. It will take about eighteen months for the chosen architect to submit his plans. When these have been approved it will probably require another eighteen months for him to draw up the working plans. The work will then be carried out in stages over a minimum period of six years.

"But there might be financial or other reasons for delaying some of the stages, so that it is conceivable that twelve or fifteen years might elapse before the work is finished. The age limit is designed to give a reasonable probability that the original architect will see his work completed."

In the competition for offices for Whitehall, held in 1914-15, there was first a sketch competition, and arising out of this, ten competitors were selected to submit designs in a final competition, each receiving an honorarium of three hundred guineas.

The ten selected finalists were: Messrs. H. Percy Adams and Charles Holden; C. T. Armstrong; Ashley and Winton Newman; Atkinson and Alexander; Buckland, Haywood and Farmer; T. Edwin Cooper; Charles Gascoyne and George Nott; E. Vincent Harris; Alick G. Horsnell and A. H. Brownrigg; and Percy Thomas, Ernest Prestwich and Ivor Jones.

The assessors were Sir Aston Webb, Mr. Reginald Blomfield and Mr. Ernest Newton.

The result of the competition was announced in February, 1915, and the selected design, by Mr. E. Vincent Harris, was accepted by the then First Commissioner; but, he stated, "in view of the present circumstances the erection of the building would be postponed." The estimated cost of the scheme, which is illustrated on page 403 of this issue, was £568,761. This figure is approximately four times less than the cost of the proposed new building.

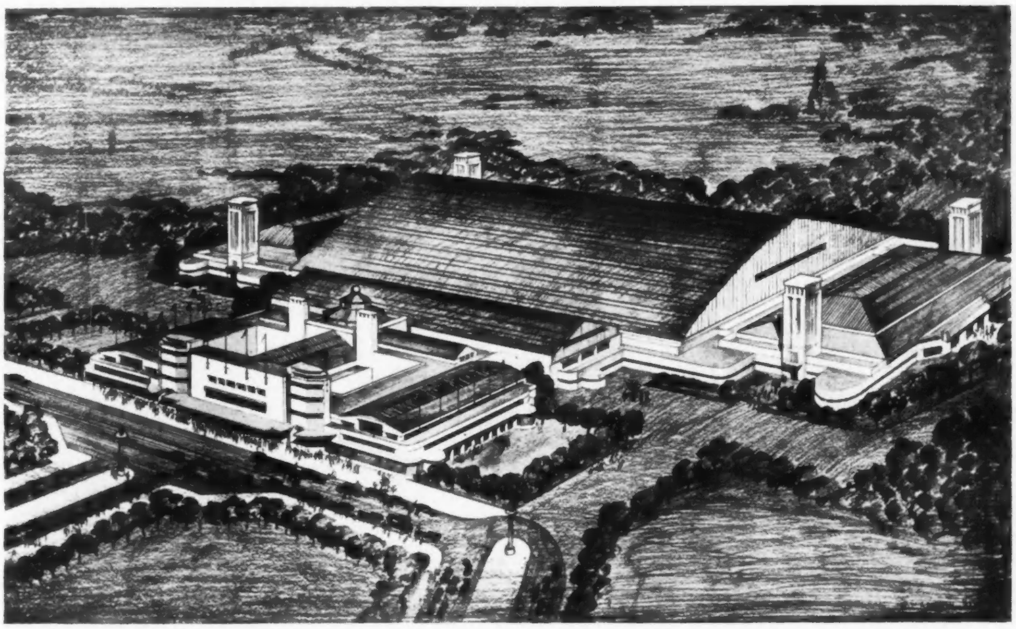
Of the competitors in the original competition, we believe that only two are eligible for inclusion in the list of architects to be compiled by Sir Gilbert Scott. These are Messrs. Thomas and Atkinson.

LECTURE ON SWEDISH ARCHITECTURE

"The Latest Developments in Swedish Architecture and Home Planning" was the subject of a lecture by Bengt Lundberg at a meeting of the Anglo-Swedish Society, held in London on Tuesday night.

The lecturer said that it must be borne in mind that in Stockholm most people lived in flats. The two drawbacks with which the leading men of today were fighting were the great width of the building—typical of the old parts of Stockholm—and the system of the block built around a small yard in the centre. The large width made it difficult to draw up a plan which gave the greatest use of the available floor space and at the same time obtained sufficient direct daylight.

In changing the town-planning scheme to the open, so-called, "Lamell" houses, each block being placed in the direction of north-south, the inhabitants obtained either morning or afternoon sun; the flats all received the same amount of sunshine, and there was none which faced due north or due south. The second important fact was to place "Lamell" houses with an amount of space between them which permitted the maximum of winter sun reaching the ground-floor flats of each house. The height of the buildings had, therefore, a certain relation to the space between each building, and this had been scientifically worked out by collaboration between the architects and the Royal Meteorological Institution of Stockholm. This idea of modern town planning was the fundamental and most important change



A perspective drawing of the proposed £330,000 exhibition hall for Liverpool, of which Ernest Shennan is the architect. See note below.

in the residential areas of Stockholm during the last three years, and it was evident that this had little to do with modern "style."

The second and equally important change during the last three years was the striving for better interior arrangements.

During prosperous times, he continued, a city appeared to concentrate on monumental and public buildings, and there were now in Stockholm new buildings such as the Town Hall, City Library, Concert Hall, Law Courts, etc. But economic crises and social movements influenced domestic architecture, and today the architect had to concentrate on the acute and never ceasing problem of better housing for the masses. It was in that direction that the young architect was making his great contribution.

EXHIBITION OF MODERN INDIAN PAINTINGS

An exhibition of Modern Indian Paintings was opened yesterday by Sir Samuel Hoare Bt., P.C. (Secretary of State for India) at the Fine Art Society's Galleries, 148 New Bond Street, W. The exhibition, which has been organized by Barada Ukil (Hon. Secretary, All-India Fine Arts and Crafts Society, Delhi), will remain open until October 21.

LIVERPOOL'S NEW EXHIBITION HALL

The largest exhibition hall in England is planned for Liverpool at a cost of £330,000. The site is one of 32½ acres, adjoining the new East Lancashire Road on the city's northern outskirts. The City Council are expected to approve the plans at their next meeting. The work is estimated to give several thousand men employment. The contractors are under penalty to complete the buildings in ten months, so that this provincial Olympia should be ready with its first exhibition about the time the new Mersey Traffic Tunnel is opened. The City Council have asked only £10,000 for the site, which is less than its market value, and only a peppercorn rental will be paid on a 999 years' lease.

The buildings, of which a perspective drawing is reproduced on this page, will occupy rising ground facing the parklands of Knowsley Vale, with new suburbs on the other side, the docks in direct touch through Walton Station, which is only a ten-minutes' walk away, and the Liverpool Airport within a short car ride. The chief materials used will be glass, reinforced concrete and stainless metal, and the façade is planned to secure attractive displays for floodlighting.

The architect, Mr. Ernest Shennan, F.R.I.B.A., has provided not only a number of halls which will permit a continuous series of exhibitions, but also a swimming pool and pleasure grounds, tea gardens, restaurants and a miniature golf course.

A huge mast at the gate will advertise current exhibitions. Behind it, a covered pavement will lead to the entrance, inside which will be vestibules with kiosks, enquiry bureaux, cloakrooms, hairdressing saloons and a post office. Above, there is to be a conference hall, with committee rooms for the convenience of exhibitors.

The first exhibition hall is 134 ft. by 54 ft., and rises through two floors of galleries to an octagonal glass dome. On either side will lie the café and restaurant, each with seating for 700 to 800 people. The kitchens are in the basement.

Then comes the main hall, 360 ft. long clear or 640 ft. including the wing halls, and 300 ft. wide, clear of supports. It will have 108,000 sq. ft. of clear floor space. There will be no galleries, all floor areas being on an equal level. The hall is to be roofed in tiers of glass, rising from 30 ft. above the ground to 80 ft. at the apex, and it will be large enough to accommodate the largest machinery. If used for public meetings, it will seat up to 15,000 people.

The swimming pool is at the far end, with broad shaded terraces overlooking the valley for sun-bathing. The pool will be 300 ft. long and 100 ft. wide and will be provided with an elaborate equipment of chutes and spring boards rising to spectacular heights. Covered stands will give plenty of room for spectators.

MANCHESTER'S TOWN HALL EXTENSION SCHEME

At a meeting last week of the Manchester Corporation Town Hall Extension Committee, it was decided to proceed with the new extension scheme as one undertaking, and not in two sections. The estimated cost of the new work is £600,000.

T. S. TAIT ON THE RE-BUILDING OF LONDON

Mr. T. S. Tait, F.R.I.B.A., in an article dealing with the rebuilding of London in *The Evening Standard* for September 27, points out that "it is nonsense to say that high buildings cannot be erected in London. Chicago has skyscrapers, and Chicago has only mud to build on instead of the far superior blue clay of London. A 25 or 30-storey building for London is entirely practical."

Mr. Tait suggests that the area which cried out for attention "consists of the stretch of mud which lines the south bank of the Thames from the County Hall to Southwark Bridge.

"Here, as was done on the northern side, an embankment should be built. On the reclaimed mud a broad roadway could be made, backed by an imposing line of modern office buildings and warehouses, which, in turn, would be backed by a canal, periodically connected with the Thames, up which barges could come to be unloaded at the rear of the warehouses and out of the way of the main stream.

"These new warehouses are essential. And the development of the southern bank of the Thames and the area behind it is an inevitable step in the rebuilding of London.

"This reclaiming of the river bank—which would not involve the demolition of one existing house—would entirely alter the aspect of the area. Business, shopping centres, and the amusement industry would flow southwards from their present cramped City and West End quarters and 'colonize' an area of London which, although valuably central, has always been rather the disgrace of the capital.

"Both the building and the traffic congestion of London would again be relieved.

"Whatever we do with London," he concluded, "we must think and demolish and rebuild bravely."

PETERBOROUGH'S NEW CIVIC BUILDINGS

The new civic buildings at Peterborough, which have been erected at a cost of £300,000 as part of a £500,000 scheme of street improvement in the city, are to be formally opened this month.

SLUM

The Birmingham Rotary Club is manifesting deep interest in the slum problem, and in order to have all the relevant points of view before it, it invited to address the Club in successive weeks the Secretary of the local Property Owners' Association, the leader of the Labour Party on the City Council, and Mr. Philip H. Massey, whose statistical investigations into this problem are being published in the JOURNAL.

Mr. Massey addressed the Club on Monday, September 25. He devoted the first part of his address to a consideration of the opinions of the speakers who had previously given addresses.

He pointed out that there were three aspects of the housing situation—the slum, the "semi-slum," and the shortage of houses. It was convenient to consider the situation under these three heads, but the great mistake which had been made in framing legislation and by local authorities was to consider these aspects as water-tight compartments. A common policy of local authorities had been to build large numbers of houses and to leave both the slums and the semi-slums. Birmingham had built a large number of houses on the outskirts of the city. It had left the slums alone. It had left the semi-slums alone. London had taken action along similar lines. In Manchester much reconditioning work had been carried out before the war in regard to back-to-back houses. Since the war, Manchester had pursued the same course as Birmingham and London. The provision of thousands of houses on the outskirts of the large cities with increased rents and fares to pay was useless, so far as the really poor and the slum dweller were concerned. The absolutely unfit houses of Great Britain could not be fewer than half a million. There were thousands and thousands of houses in the "half-way" category mainly built in the later stages of the Industrial Revolution.

It was the duty of private utility societies and private enterprise to proceed with a policy of reconditioning, but this should be followed with great care. The danger was lest reconditioning should be done in respect of houses that did not justify such work.

CHANGES OF ADDRESS

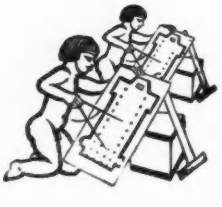
Messrs. Walter Tapper, A.R.A., and Michael Tapper, A.R.I.B.A., have moved their offices from 10 Melina Place to 4 Dean's Yard, S.W.1. Telephone No.: Victoria 0463.

Mr. Wallace J. Gregory, F.S.I., has moved his offices to Vincent House, Vincent Square, Westminster, S.W.1.

Mr. Gordon Pringle, M.A., A.R.I.B.A., has moved his office to No. 4A, Bloomsbury Square, W.C.1. Telephone No.: Holborn 3543.

The address of Mr. Cecil Upcher, F.R.I.B.A., is now No. 4, The Close, Norwich.

COMPETITION



NEWS

SURBITON HOSPITAL COMPETITION

The result of the competition for a proposed hospital at Surbiton was announced last week as follows:

Design placed first (premium £120): Wallace Marchment, F.R.I.B.A., 11 Stanley House, S.W.8.

Design placed second (premium £75): W. Naseby Adams, A.R.I.B.A., 14 Ladbroke Grove, W.

Design placed third (premium £50): Nicol and Nicol and Thomas, King's Court, 107 Colmore Row, Birmingham.

Design placed fourth (premium £25): William Sinning, 26 Queen Victoria Street, E.C.4.

Mr. C. E. Elcock, F.R.I.B.A., was the assessor. The four premiated designs are illustrated on pages 414-418 of this issue. One hundred and sixteen sets of drawings were submitted; these will be on exhibition at the Assembly Rooms, Surbiton, tomorrow, between the hours of 12 noon to 10 p.m. and on Saturday, October 7, from 1 p.m. to 10 p.m.

GIDEA PARK HOUSES COMPETITION

We understand that the designs submitted in the above competition were adjudged by the assessors at the end of last month, but that the promoters do not propose to publish the results until the selected competitors have complied with the conditions and submitted tenders. The houses, when erected, will be finally adjudged by the assessors at the end of June next year. Until that date the promoters have decided not to permit the publication of any of the designs.

REPLANNING OF STOCKHOLM

I understand (writes our special correspondent) that though no adjudication has been made in the competition for the town planning of Lower Norrmalm, Stockholm, the drawings have been exhibited in public and have also been the subject of at least one lecture in Stockholm.

ENTERTAINMENTS HALL, BEXHILL

The Bexhill Corporation state that about 150 sets of conditions have so far been issued in connection with the Coastguard site competition, which provides for the erection of an entertainments hall at a cost of about £50,000.

Competitions Open

December 4.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor: Thomas S. Tait, F.R.I.B.A. Premiums: £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1. The conditions were reviewed in our last issue.

December 15.—Sending-in Day. Messrs. Jenson and Nicholson invite designs for the decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Proposed Extensions to the Town Hall, Swindon. Assessor: Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere A.R.I.B.A.

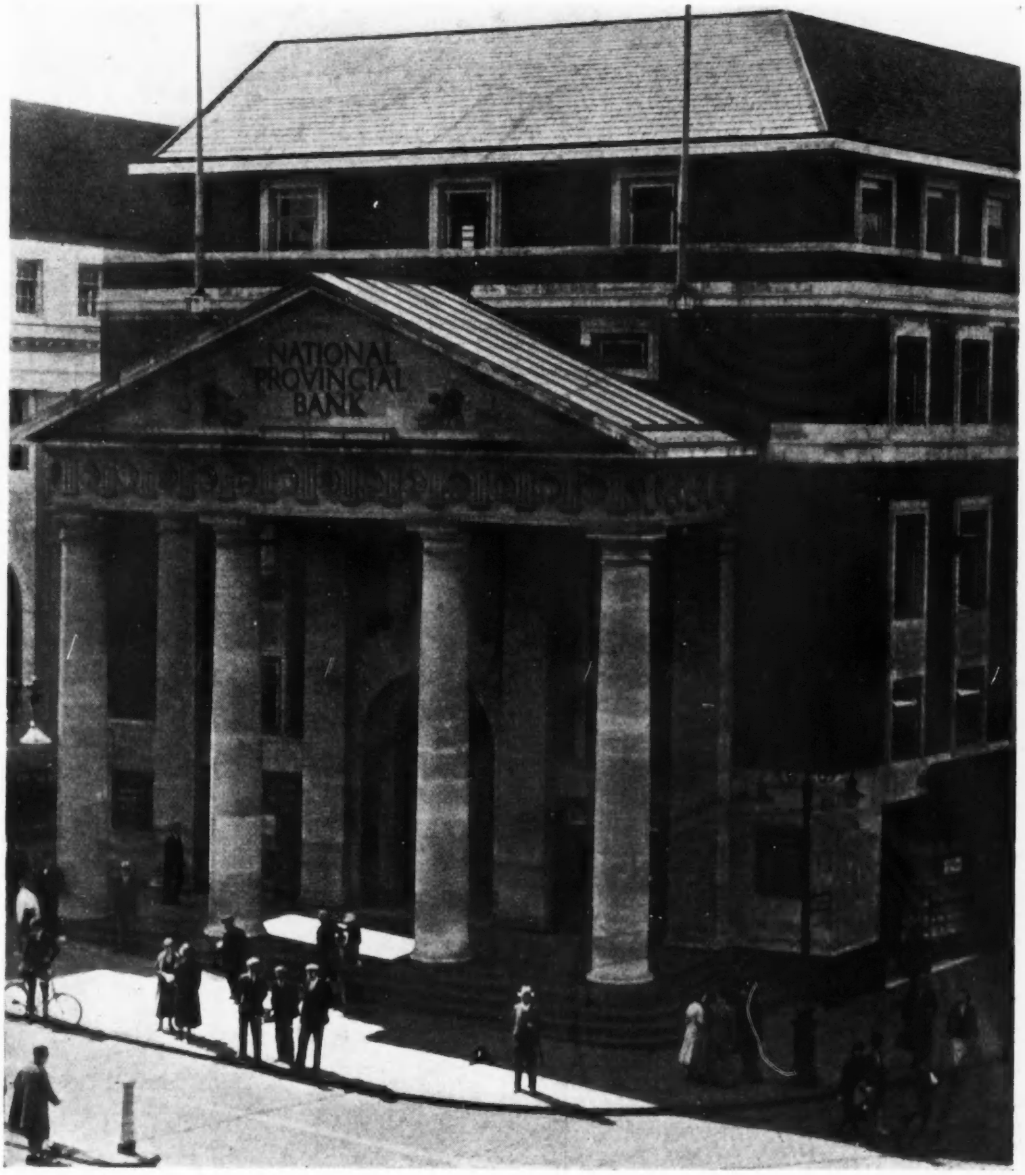
Proposed Town Hall and Municipal Buildings, Stoke Newington. Assessor: Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

R. I. B. A.

INTERMEDIATE EXAMINATION

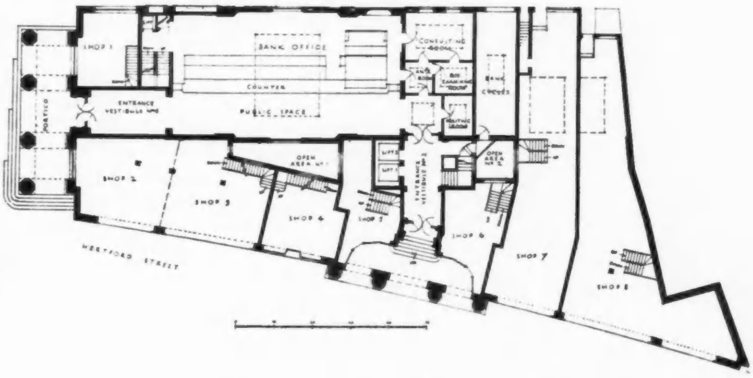
The following are the dates on which the forthcoming R.I.B.A. Intermediate Examination will be held: November 17, 18, 20, 21, and 23, 1933. (Last day for receiving applications: October 17, 1933.)

A BANK AT COVENTRY


NATIONAL PROVINCIAL BANK

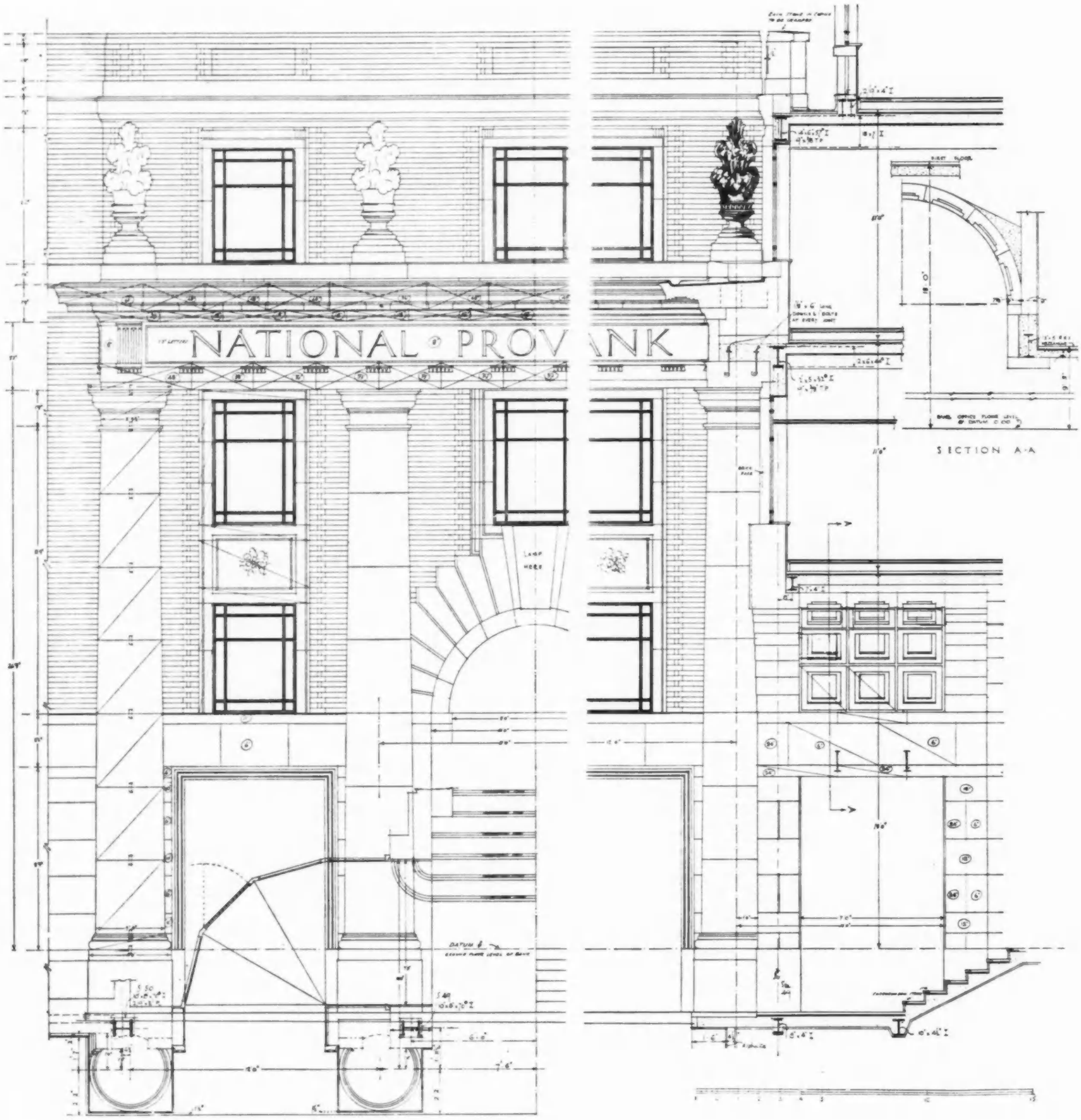
The main entrance in High Street.

This bank stands at the corner of Hertford Street and High Street, Coventry, with a frontage to the less important Grey Friars Lane (top of plan). The plan is a new departure in bank planning in that practically the whole of the frontage is devoted to shops, while the bank requires only the frontage necessary to provide two entrances, the bank office occupying the less valuable space at the rear.


SHOP 1
BANK OFFICE
CONSULTING ROOM
ANTE ROOM
BILL EXAMINING ROOM
BANK CHEQUES
COUNTER
ENTRANCE VESTIBULE No 1
PUBLIC SPACE
PORTICO
WAITING ROOM
OPEN AREA No 1
LIFT 2
LIFT 1
ENTRANCE VESTIBULE No 2
OPEN AREA No 2
SHOP 2
SHOP 3
SHOP 4
SHOP 5
SHOP 6
SHOP 7
SHOP 8
HERTFORD STREET

DESIGNED BY F. C. R. PALMER

NATIONAL PROVINCIAL BANK, COVENTRY:

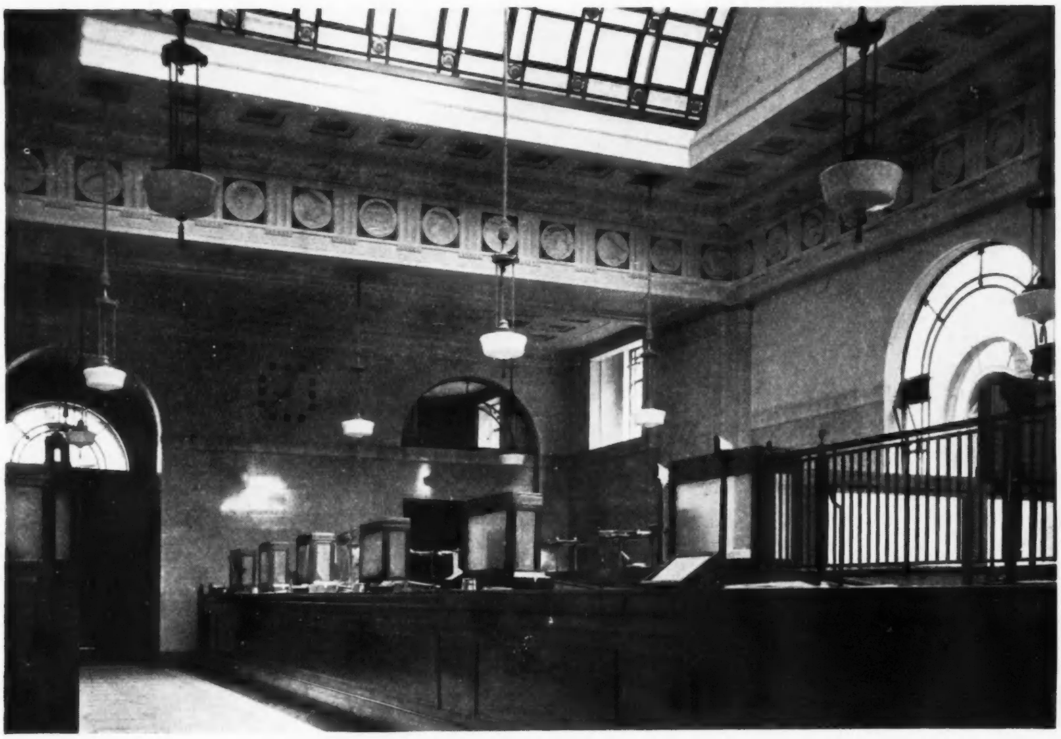


A detail of the main entrance portico.

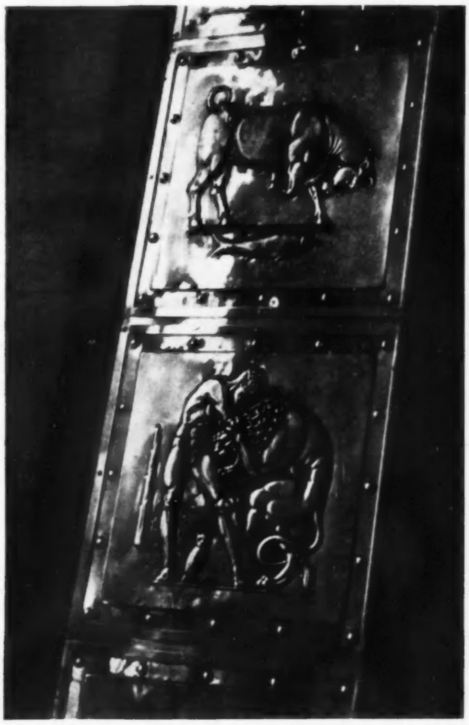
As the whole of the frontages are devoted to shops, the main entrance to the Bank has been emphasized by a portico extending across the end of the building, while the side entrance (to Hertford Place) has received similar though rather less elaborate treatment.

The elevations are carried out in brick and stone; the roof is covered with Westmorland green slates; and the entrance doors are executed in stainless steel. The motifs on the panels of the main entrance doors and the metopes in the entablature are derived from ancient or modern coins. The carved stone panels on the elevations are motifs representative of the trades carried on in Coventry.

DESIGNED BY F. C. R. PALMER



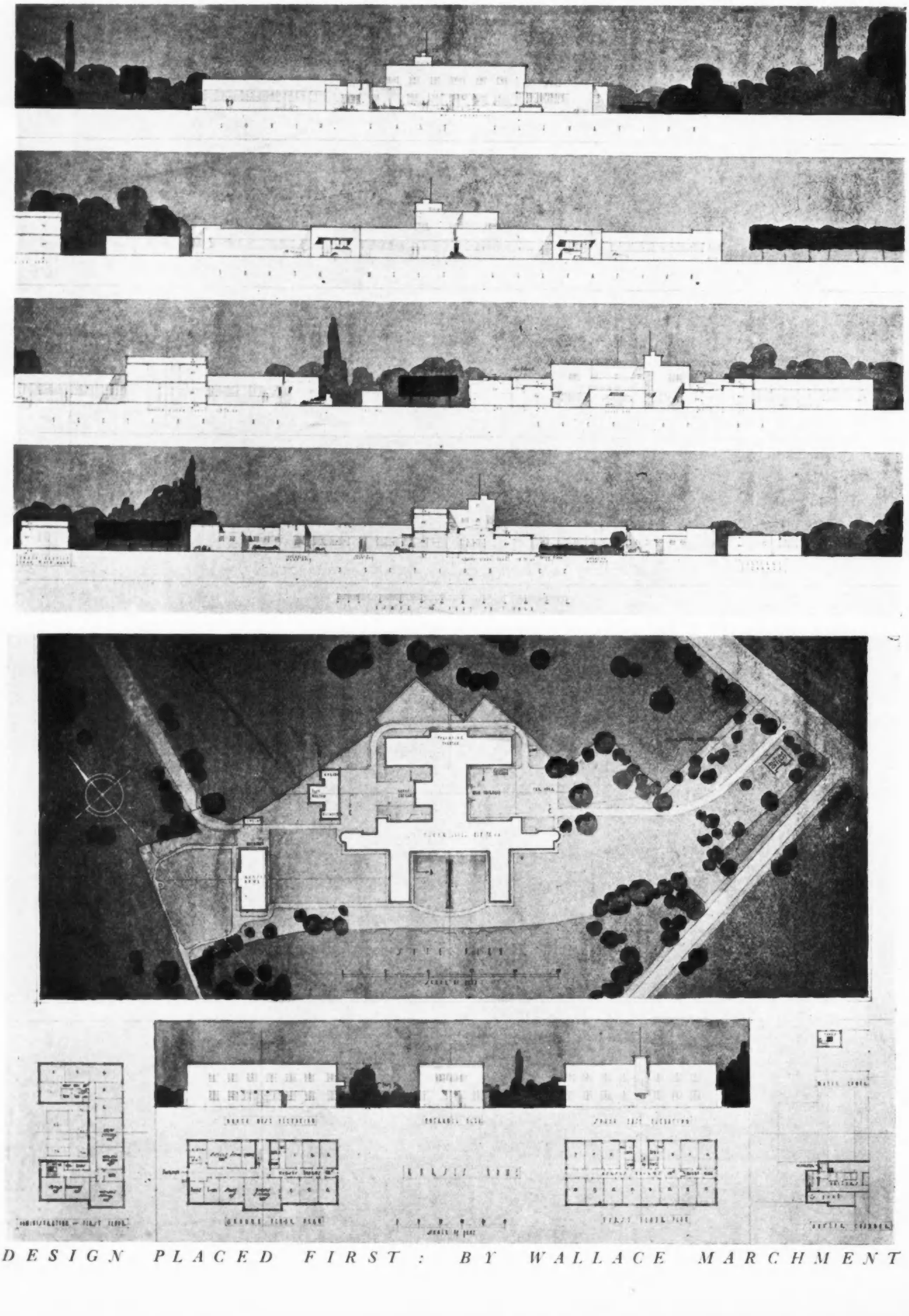
The banking hall, looking towards the main entrance vestibule.



One of the panels on the main entrance doors.

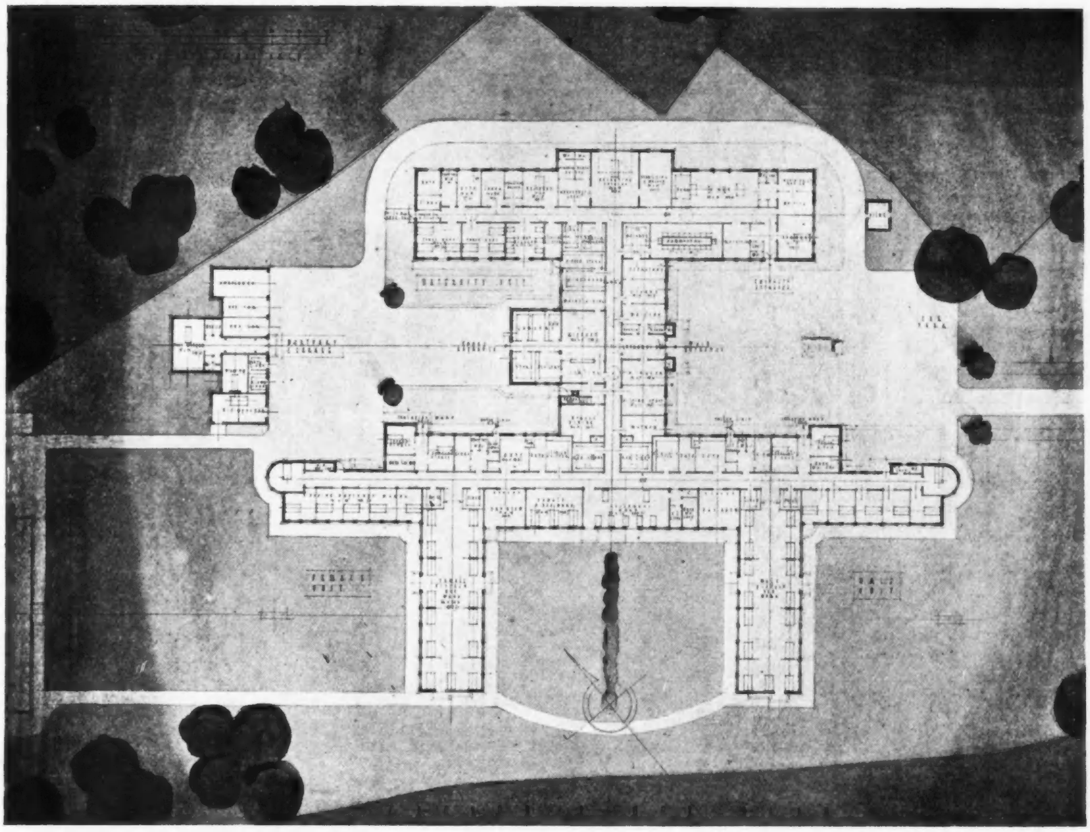
The ceiling of the entrance vestibule.

SURBITON HOSPITAL COMPETITION:

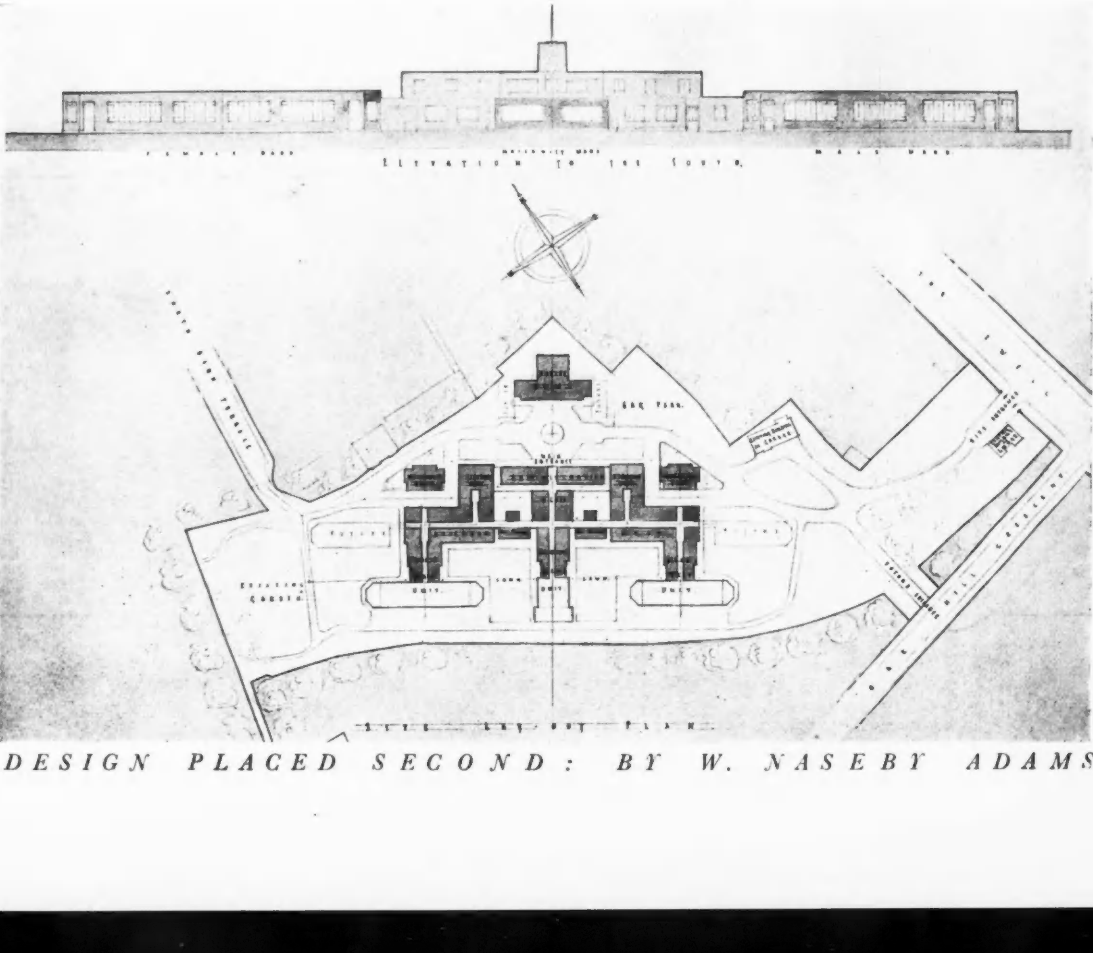

NORTH EAST ELEVATION
SOUTH WEST ELEVATION
SITE PLAN
SCALE OF FEET
ADMINISTRATION — FIRST FLOOR
GROUND FLOOR PLAN
FIRST FLOOR PLAN
NORTH EAST ELEVATION

DESIGN PLACED FIRST: BY WALLACE MARCHMENT

THE PREMIATED DESIGNS

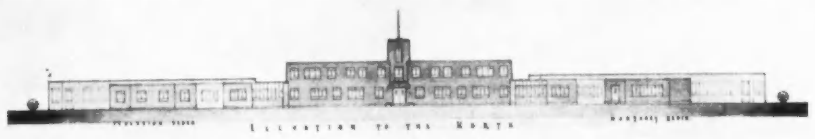


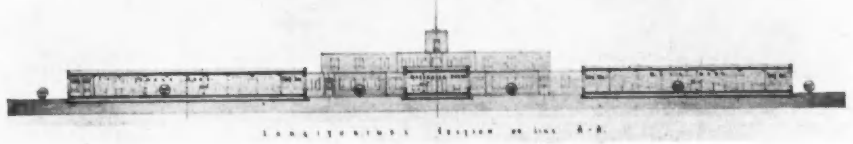
DESIGN PLACED FIRST: BY WALLACE MARCHMENT

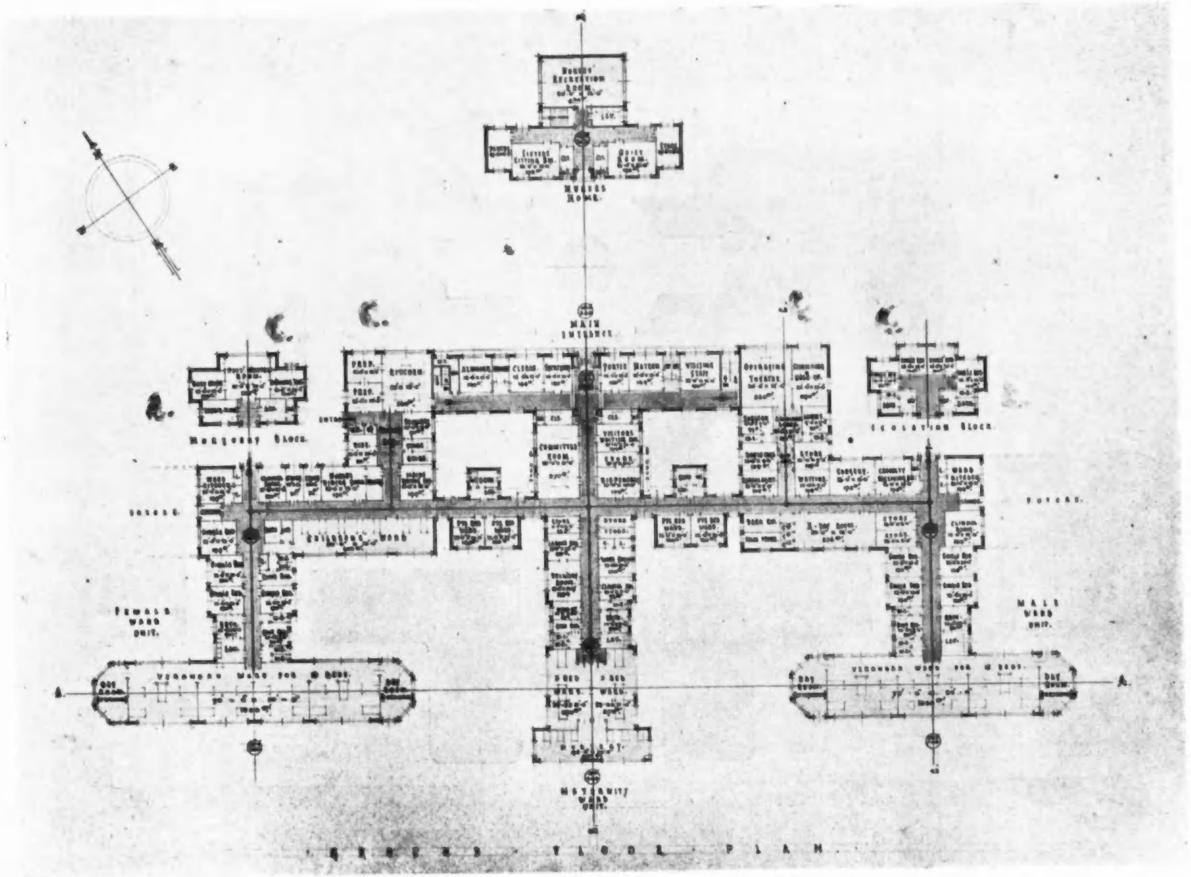

FEMALE WARD
MATERNITY WARD
MALE WARD
ELEVATION TO THE SOUTH
CAR PARK
MAIN ENTRANCE
EXISTING GARDEN
UNIT
LAWN
UNIT
LAWN
UNIT
SITE LAY OUT PLAN

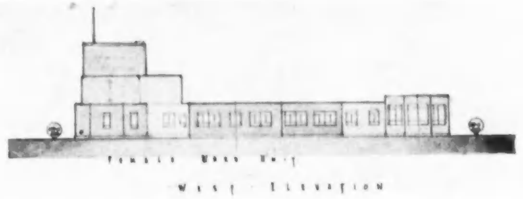
DESIGN PLACED SECOND: BY W. NASEBY ADAMS

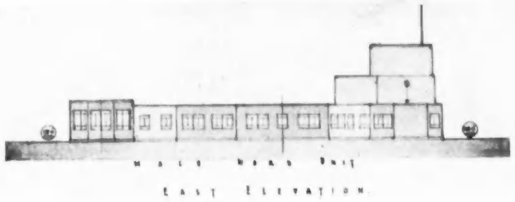
SURBITON HOSPITAL COMPETITION: THE PREMIATED DESIGNS

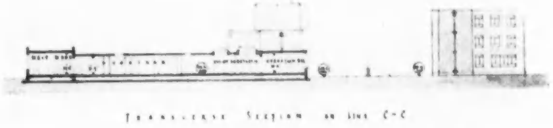

Isolation Block
Elevation to the North
Mortuary Block

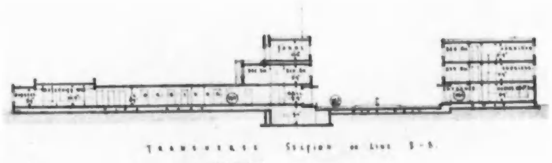

Longitudinal Section on Line A-A


Nurses' Recreation Room
Nurses' Home
Main Entrance
Mortuary Block
Isolation Block
Female Ward Unit
Male Ward Unit
Maternity Ward Unit
A
A
Ground Floor Plan

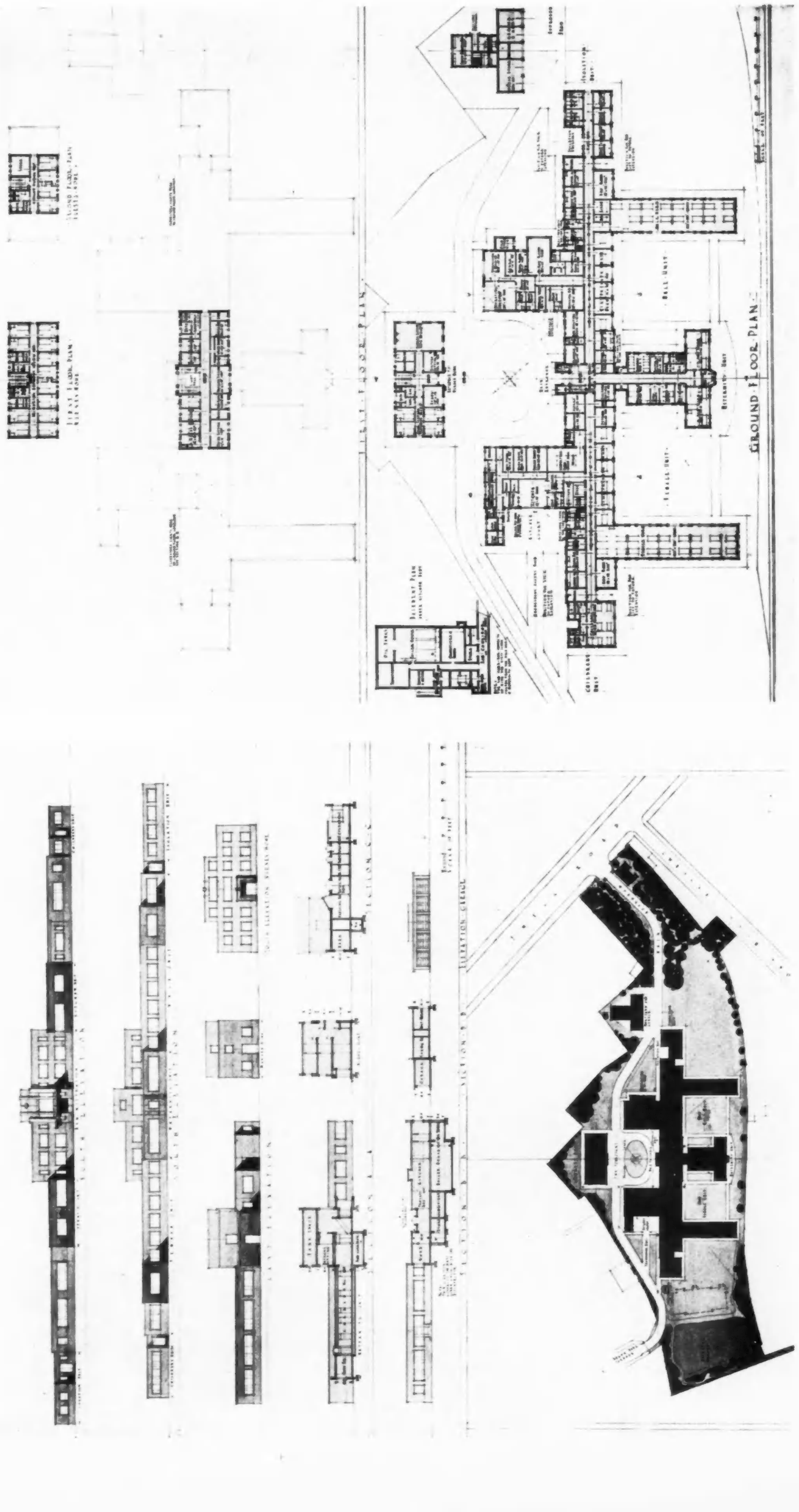

Female Ward Unit
West Elevation


Male Ward Unit
East Elevation

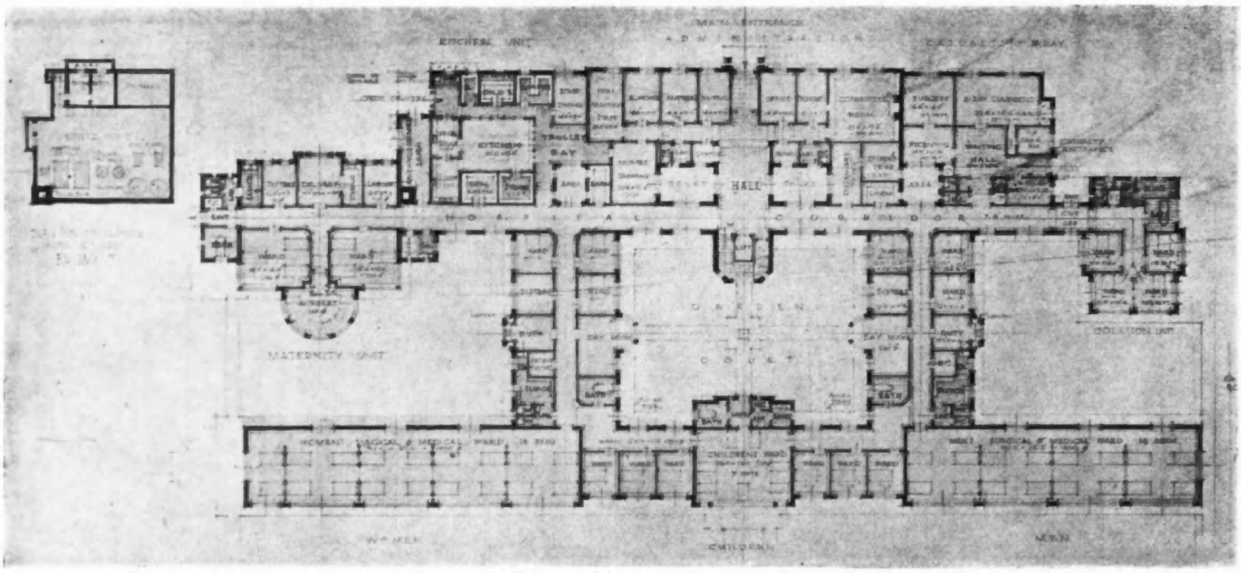

Transverse Section on Line C-C


Transverse Section on Line B-B

DESIGN PLACED SECOND: BY W. NASEBY ADAMS


GROUND FLOOR PLAN
FIRST FLOOR PLAN
MALE UNIT
FEMALE UNIT

DESIGN PLACED THIRD: BY NICOL AND NICOL AND THOMAS



Surbiton Hospital Competition. Ground Floor Plan of Design Placed Fourth. By William Sinning.

LETTERS FROM READERS

SIR EDWIN LUTYENS, R.A.
(President, Institute of Registered Architects)
R. H.

The Institute of Registered Architects

Sir,—In answer to the public utterances of the Chairman of the statutory Architects' Registration Council, I have already fully set out the aims and objects of the new Institute of Registered Architects, and the reasons why, by the very constitution of the statutory Council, that latter body is itself powerless to achieve them.

In announcing the establishment of the Institute of Registered Architects and inviting the co-operation of the Registration Council, I made it clear that the Institute intended to function as an organization complementary to the various architectural societies and in rivalry with none, and that its main purpose was to focus the aims of the Registered Architect and to make that title and the value of that title known and respected.

The unprovoked attacks on the new Institute by the President of the R.I.B.A. and the Chairman of the Architects' Registration Council which immediately followed, indicated a fear that their respective bodies might eventually be overshadowed by the Institute of Registered Architects.

I have already replied at length to the observations of the President and the Chairman, and I need only add that it appears the Chairman of the Registration Council issued his letter to the Press without first consulting his Council.

After a lapse of several weeks the Registration Council now implies that it, and it alone, is all-sufficient for the purpose of protecting and advancing the interests of the registered architect.

If that be a fact, it follows that all the existing architectural bodies are unnecessary and that it is a waste of money for a Registered architect to belong to any of them.

But what is the real position? An architect pays a fee of 6s. 8d. per annum for registration under the Act. Of this sum 3s. 4d. must be allocated to a scholarship fund. Is it, then, possible for the Registration Council to fulfil the functions of a professional protection society for 3s. 4d. per member per annum? That seems too good a bargain. But even if this economic miracle were possible, is the Registration Council empowered by the Act to function as a professional protection society? I say, definitely no.

I will repeat the questions which I put to the Chairman of the Registration Council in my previous letter to the Press, viz.:—

What does the Chairman think his Registration Council can do beyond maintaining a Register and to some extent approving the examinations which are in the future to have some say in entitling the aspirant to become a "Registered Architect"?

Can this Council prevent anybody who chooses to do so from describing himself as an "architect"? Can this Council even promote an amendment of the Registration Act? Has his Council any power to prosecute for a flagrant infringement of the Act? Has his Council as yet even appreciated the fact that, *prima facie*, they must register anyone who, on January 1, 1932, chose to call himself an "architect"?

Has his Council adopted a professional code? Has it any, and if so, what power to do so, and whence derived? And, if so, what powers have they to enforce it?

It is unfortunate that the Chairman of the Architects' Registration Council has not seen fit to reply to these questions. His silence is ominous and serves to confirm the opinion I had already formed that the Architects' Registration Council find themselves unable to exercise the several functions above outlined.

In all the circumstances the formation of the Institute of Registered Architects seems indeed to be entirely justified.

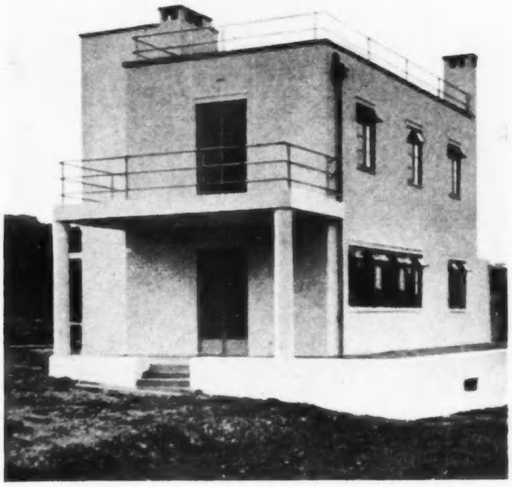
EDWIN L. LUTYENS

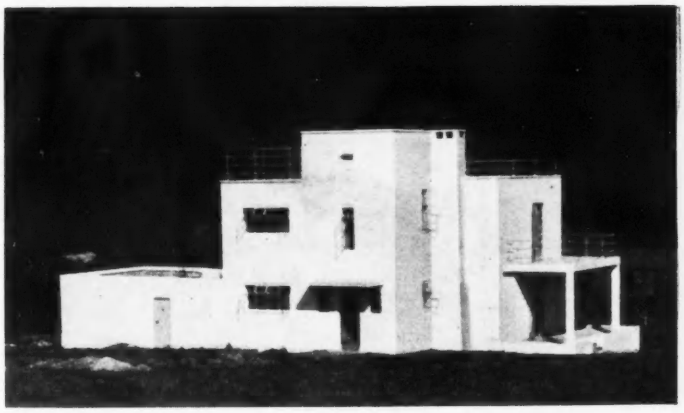
The Layman and Architecture

Sir,—I was much interested in the list of books recommended by Astragal to the young lady, with promising business ability, who desired a knowledge of architecture. Personally, I would like to have seen the late Sir Thomas Jackson's *Architecture* included. But the important question is whether such a formidable "wodge" of reading matter can be digested by a layman in the short space of one month.

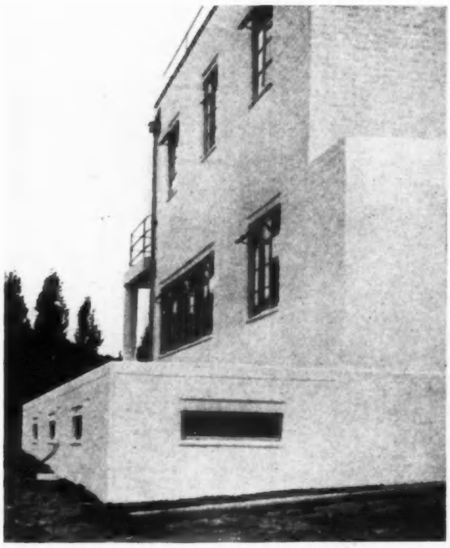
R. H.

HOUSE AT LUDDESDOWNE, KENT





The house is constructed with 11 in. cavity brick walls with rustic facings cream-washed. The balcony is of reinforced concrete, and the columns are rolled steel stanchions cased in fine concrete. The roof is of normal timber construction with rough boarding, felt and asphalt. Specially made metal windows of standard section are used throughout. The floors are of oak blocks on oak boards, and the internal flush doors are also oak-faced. The three photographs show: above, the house from the south, and from the west showing the entrance, and below, from the east looking across the terrace.



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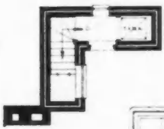
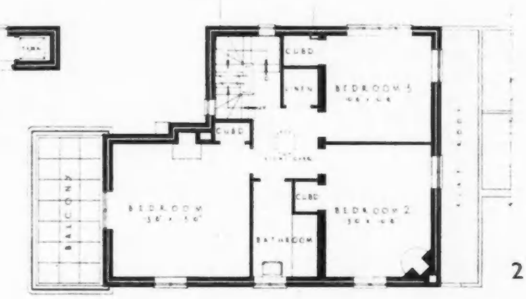
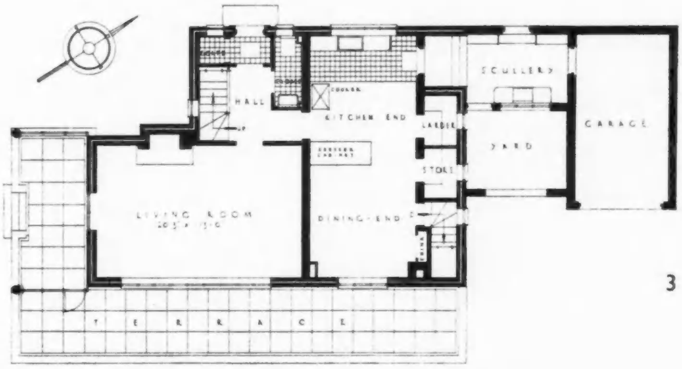
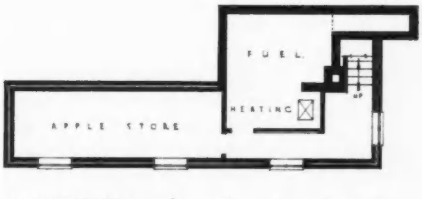



CUBD
LINEN
BEDROOM 3
CUBD
BALCONY
BEDROOM
CUBD
BEDROOM 2
BATHROOM
FLAT ROOF

2


HALL
UP
COOKER
KITCHEN END
DRESSER CABINET
SCULLERY
LARDER
YARD
STORE
GARAGE
LIVING ROOM
20'3" × 15'0"
DINING-END
TERRACE

3

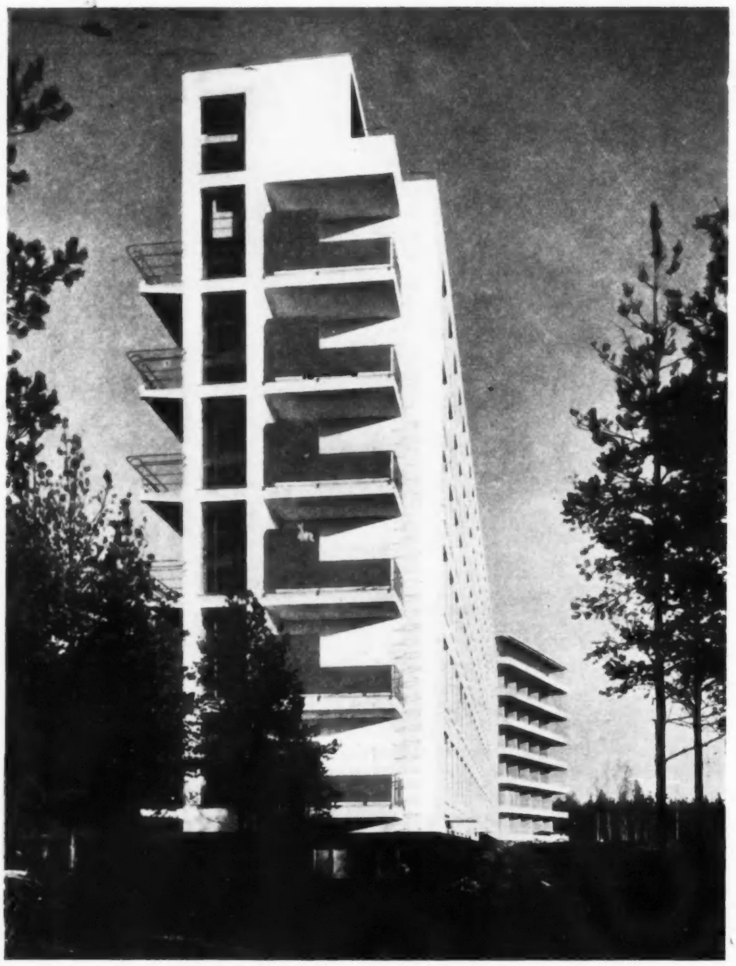

FUEL
HEATING
UP
APPLE STORE
10
15
20
25

4

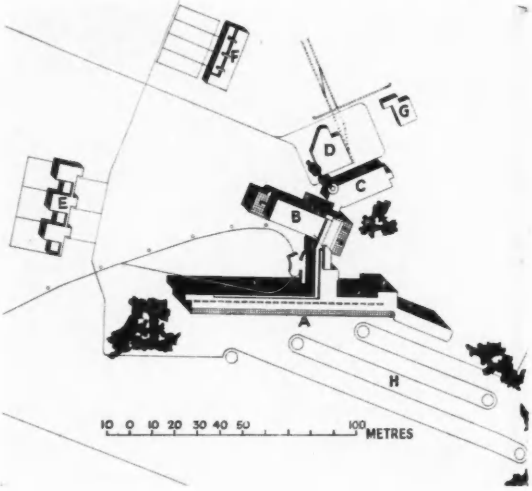
The plans above show: 1, the staircase giving access to the flat roof; 2, the first floor; 3, the ground floor; and 4, the apple store and heating chamber under the terrace, where the ground falls away on the south-east side. The windows of the apple store can be seen in the adjoining photograph.

DESIGNED BY FREDERICK ETCHELLS

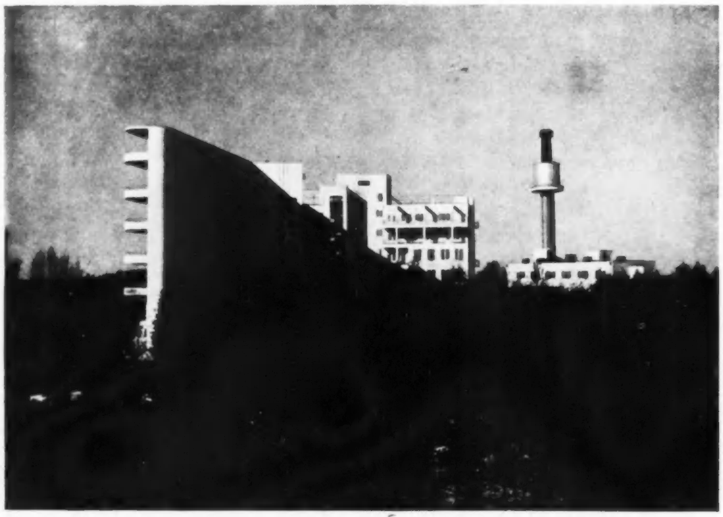
A TUBERCULOSIS SANATORIUM



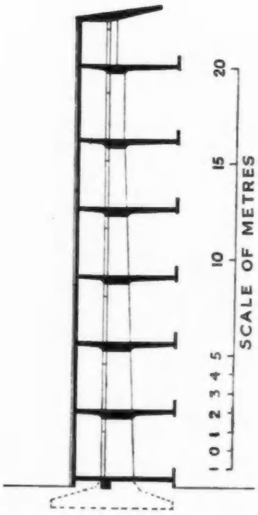
The end view of wing A.



The South-west Finland Tuberculosis Sanatorium at Paimio is, on account of its isolated position, a self-contained community. It consists of a central block containing the staircases, etc., and a number of radiating wings, as shown on the block-plan above. The detailed planning of the three main wings: A, B and C, and of the power-house block D, are given on the facing page. Wing E is devoted to houses for the doctors, wing F to houses for employees, G is the garage, and H the gardens for the use of patients. The main wing A containing the patients' rooms, has a S.S.E. aspect. A reinforced concrete framework is used throughout, extensive use being made of the possibilities of cantilever construction.

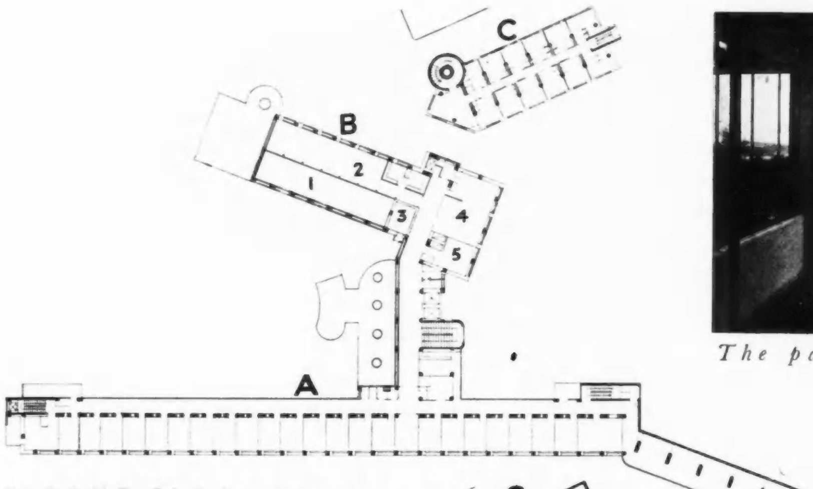


The other end of wing A, with wing C and the power-house chimney beyond.

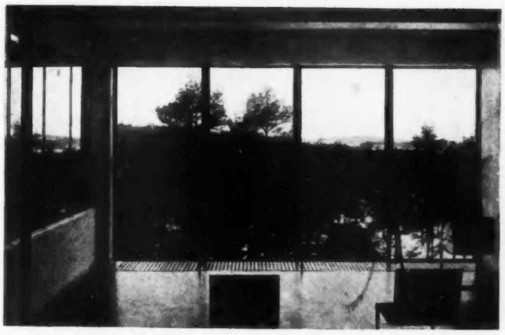


A section through one of the wings.

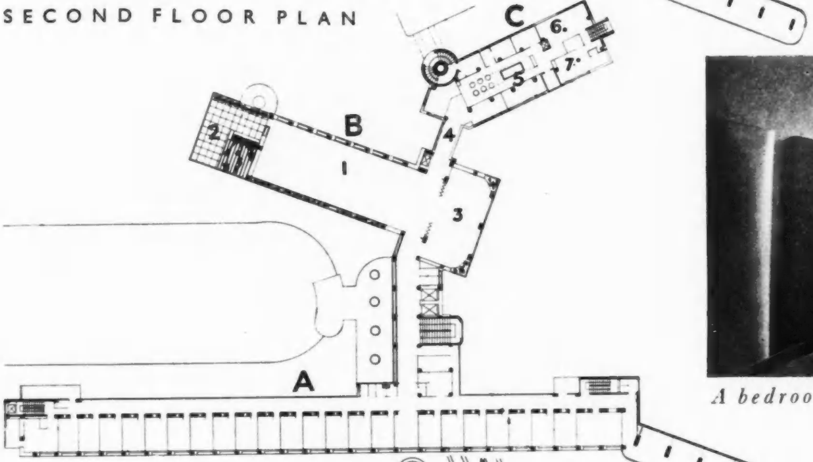
FINLAND : BY ALVAR AALTO



SECOND FLOOR PLAN

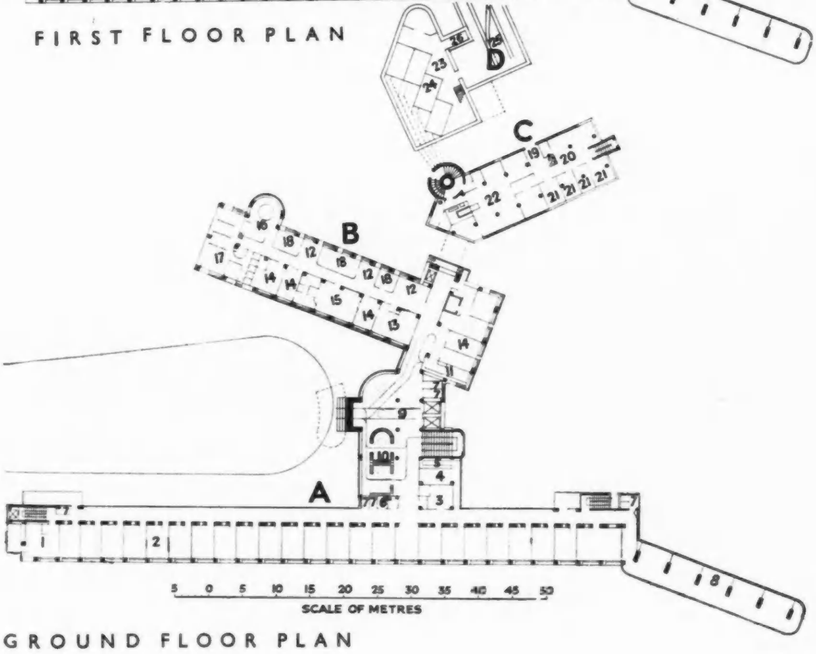


The patients' reading-room on the second floor.



FIRST FLOOR PLAN

A bedroom showing the built-in wardrobes and double window.



GROUND FLOOR PLAN

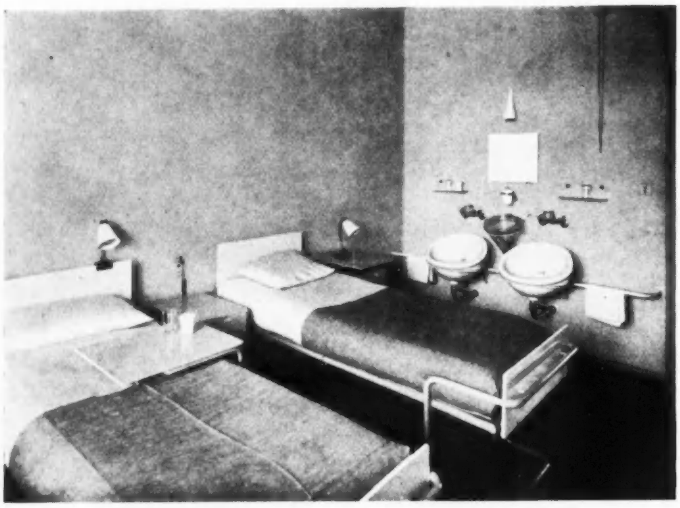
KEY TO PLANS

SECOND FLOOR.—WING A. As on the ground floor. WING B. 1: Upper part of dining-room. 2: Reading room and library. 3: Cinema projector room. 4: Dining and recreation rooms for nurses. 5: Guest rooms. WING C. "Hotel" for staff with assembly room in the angle.

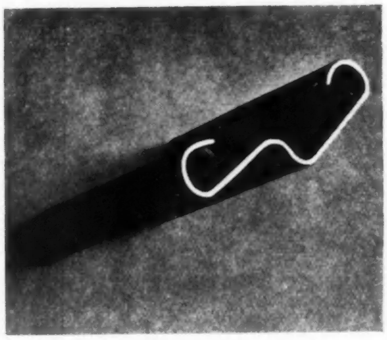
FIRST FLOOR.—WING A. As on the ground floor. WING B. 1: Dining hall. 2: Summer terrace with pergola, etc. 3: Recreation room. 4: Service room. WING C. 5: Kitchen with refrigerators, cloak rooms, etc., housekeeper's storage room for flour, sugar, cold and warm foods, and scullery. 6: Staff dining-room. 7: Housekeeper's quarters.

GROUND FLOOR.—WING A. 1: Nurses' quarters. 2: Patients' rooms. 3: Divisional day rooms with glass walls. 4: Washing room, utensils, general cleaning and disinfection. 5: Laundry. 6: Sputum analysis room in two divisions, with double lift to sterilizing room on the first floor. 7: W.C.'s, urinals, bidets, foot-baths, etc. 8: "Lying halls" for the more serious cases. 9: The entrance hall. 10: Shoe changing room. WING B. 11: Porter, post office, wireless, telephone exchange, etc. 12: Waiting niches for patients in corridors. 13: Administration rooms and doctors' consulting rooms. 14: Doctors' room. 15: X-ray. 16: Operation theatre. 17: Therapy. 18: Laboratories dentists' and apothecaries' rooms., WING C. 19: Entrance for provisions and for kitchen and bakery. 20: Sorting room for provisions. 21: Cold storage. 22: Bakery. WING D. 23: Power House. 24: Boilers. 25: Tunnel for coal trucks. 26: Shower.

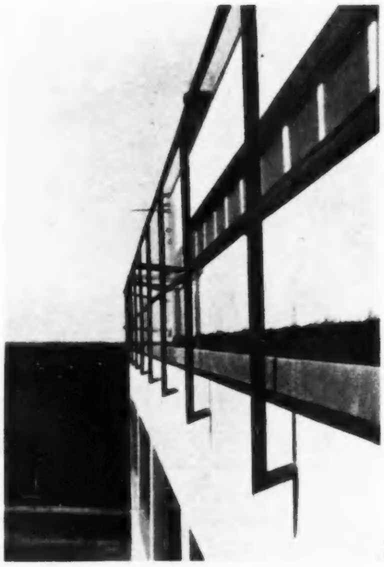
A TUBERCULOSIS SANATORIUM,



A typical two-bed room.



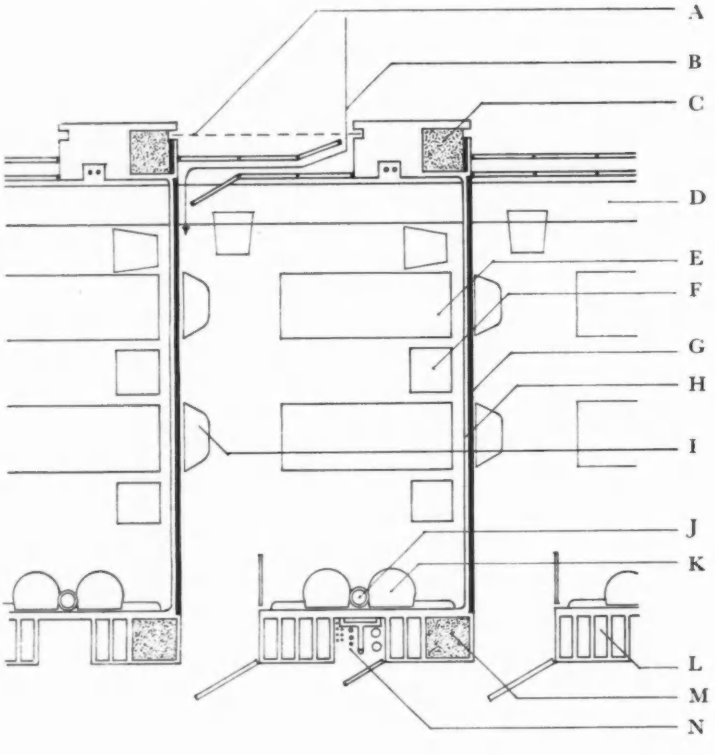
1



3

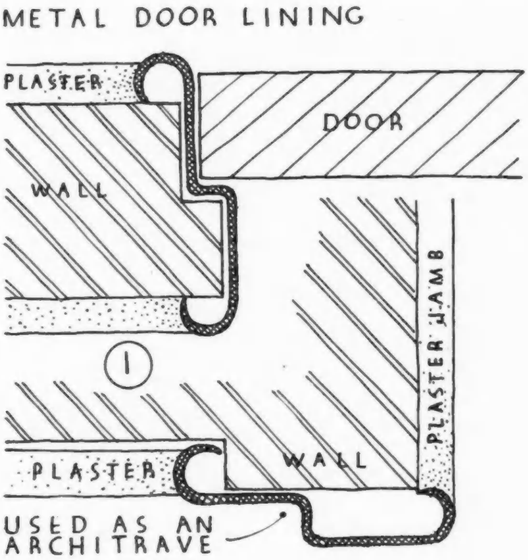
4

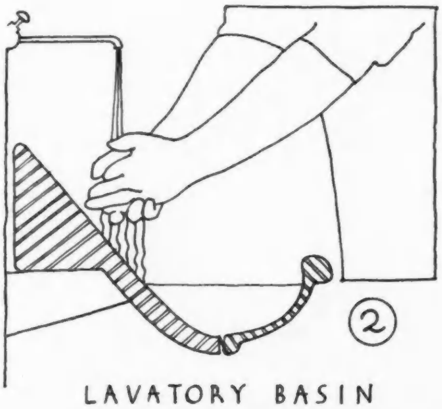
For references to the above photographs, see caption on facing page.

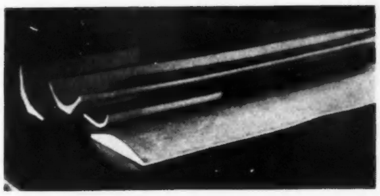


Plan of bedroom lay-out showing : A : outer shutters. B : vertical window ventilation. C : concrete framework. D : table. E : bed. F : bedside cupboard. G : soft wall. H : hard wall. I : wardrobe. J : trap. K : basin (see detail on opposite page). L : evacuation. M : concrete frame-work. N : piping shaft. O : corridor. P : cantilevered wall and window.

FINLAND: BY ALVAR AALTO


METAL DOOR LINING
PLASTER
DOOR
WALL
PLASTER JAMB
①
PLASTER
WALL
USED AS AN ARCHITRAVE


②
LAVATORY BASIN



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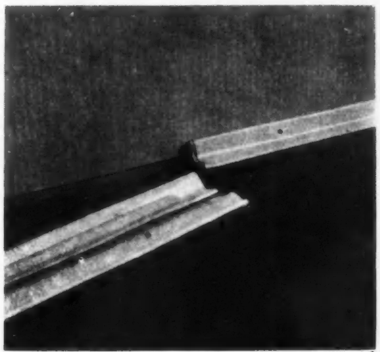

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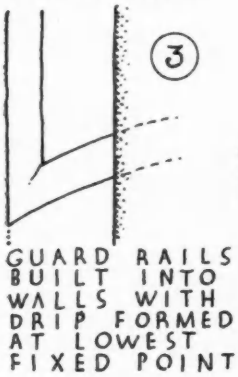
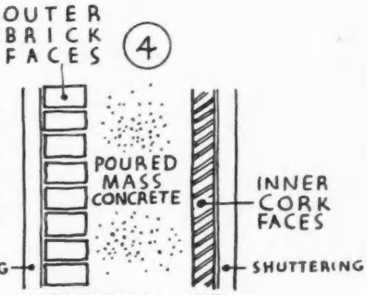
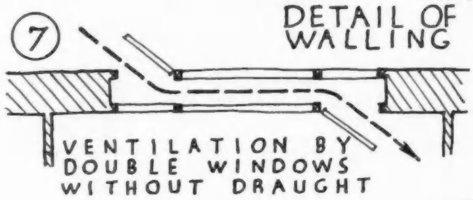
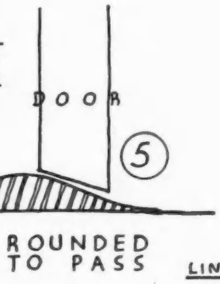
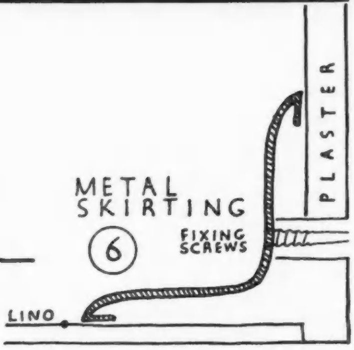

③
GUARD RAILS BUILT INTO WALLS WITH DRIP FORMED AT LOWEST FIXED POINT


OUTER BRICK FACES
④
POURED MASS CONCRETE
INNER CORK FACES
SHUTTERING
SHUTTERING
DETAIL OF WALLING

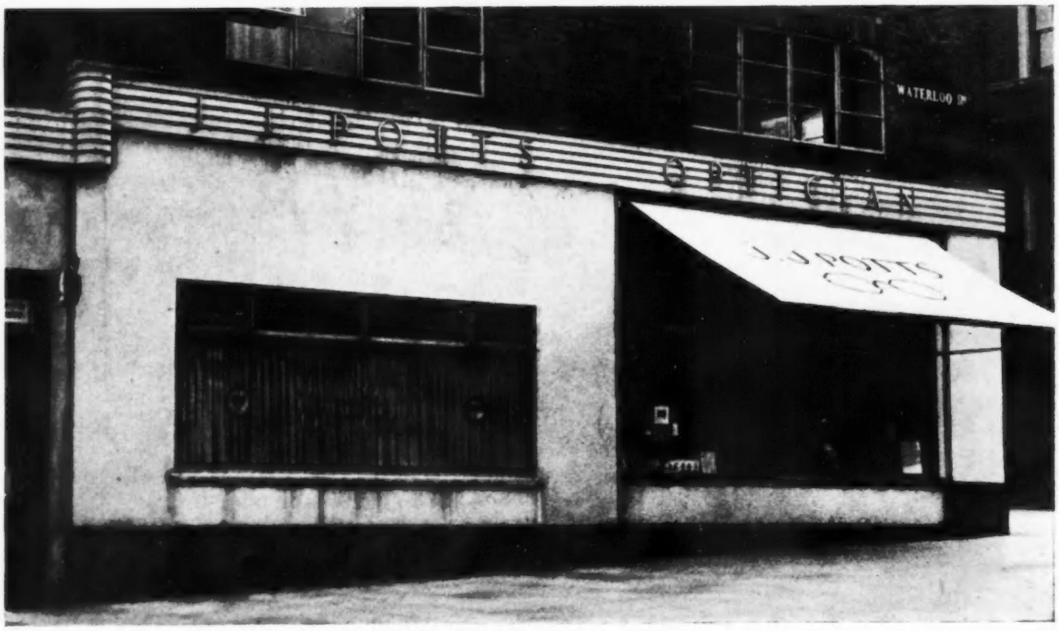

⑦
VENTILATION BY DOUBLE WINDOWS WITHOUT DRAUGHT


DOOR
⑤
FLOOR
RUBBER DOOR STOPS ROUNDED TO ALLOW TROLLEYS TO PASS

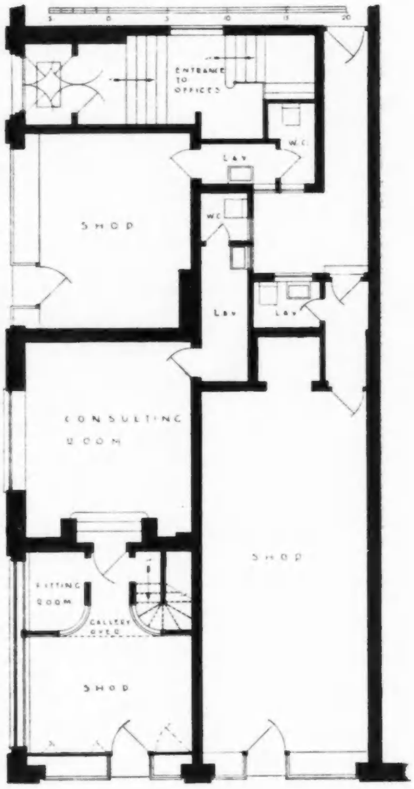

PLASTER
METAL SKIRTING
FIXING SCREWS
⑥
LINO

Some constructional details. The numbers refer to the drawings and photographs on this page and the photographs on the last column of the facing page. 1: The standard zinc section, used both as door lining and architrave. 2: The wash-basin specially designed to prevent splashing and noise. (It is seen in position in the photograph of the two-bed room). 3: Guard-rails designed to throw off the rainwater, and prevent staining of the wall surface. 4: The standard wall construction. 5: A rubber threshold for doors, allowing close shutting and at the same time enabling trolleys to be run over it. 6: The standard sink skirting, which fits tightly against floor and wall finish. 7: Double window with draughtless ventilation, used in the bedrooms and also shown in the bedroom plan on the facing page.

A SHOP AT WOLVERHAMPTON


J. J. POTTS
OPTICIAN
J. J. POTTS
WATERLOO

J. J. POTTS
J. J. POTTS
CHAUSS


5 0 5 10 15 20
ENTRANCE TO OFFICES
W.C.
LAV
SHOP
W.C.
LAV
LAV
CONSULTING ROOM
FITTING ROOM
GALLERY OVER
SHOP
SHOP

This shop and consulting room for an optician have been inserted in the ground floor portion of an existing office building. A new staircase has also been added to serve the office floors that remain above.

The external facing of the shop is of cream-coloured cement sprayed on, with a black plinth. The screen to the shop is of laminated board faced with Australian walnut, with ebonised mahogany cover-strips and cornice.

BY LAVENDER AND TWENTYMAN

SLUM

*[In our SLUM issue for June 22 we dealt with the housing and slum clearance problems in six cities : Liverpool, Leeds, Manchester, Birmingham, Sheffield, and Glasgow. Similar analyses of other cities have appeared as follows : Stoke-on-Trent (July 27) ; Bristol (August 24) ; Hull and Cardiff (September 7) ; Newcastle-on-Tyne and Bradford (September 21). Below we print the last two articles in this series. We shall publish, in the near future, a special issue devoted to the housing and slum clearance problems in London.—*ED., *A.J.]*

[By PHILIP H. MASSEY]
B.Sc. (Econ.), F.R.Econ.S.

EDINBURGH

GENERAL POSITION

Area	32,401 acres		
Population 1921	420,264		
1931	439,010		(23,000 unemployed)
Decennial increase in population		18,746	
Decennial increase in occupied dwellings		10,648	

1931	Persons per acre	13·5		
	Population in private families	417,753		
	Structurally separate dwellings occupied	105,702		
	Average size of occupied dwellings	3·55 rooms		
	Persons per room	1·11		
1921	Population in private families	397,562		
	Structurally separate dwellings occupied	95,054		
	Persons per room	1·18		
	Average size of occupied dwellings	3·54 rooms		
1931	Persons living more than 4 per room	15,185	or	3·6%
	Persons living 4 and over 3 per room	28,708	or	6·9%
	Persons living 3 and over 2 per room	72,841	or	17·4%
	Total over 2 therefore	116,734	or	27·9%

The One- and Two-Roomed Houses

20,144	people (4·8%) live in one-roomed houses, which number 7,123 (6·7% of all houses).
134,787	people (32·3%) live in two-roomed houses, which number 33,591 (31·8% of all houses).
603	families living 6 or more in 1 room
122	with 8 or more in 1
12	with 10 or more in 1
1,823	families living 8 or more in 2 rooms
325	with 10 or more in 2
42	with 12 or more in 2

The Wards

Number of Wards in City	23
Number of Wards containing over all average of over 1 person per room	15
Number of Wards containing over all average of over 1½ persons per room	7

Three Worst Wards on Persons Per Room Standard

	North Leith	Central Leith	St. Giles
Population in private houses	19,286	13,883	18,516
Living over 4 per room ..	1,832 (9·5%)	952 (6·9%)	1,817 (9·8%)
Living over 2 per room ..	9,901 (51·3%)	6,470 (46·6%)	8,433 (45·5%)
Structurally separate dwellings occupied	4,305	3,165	4,581
1 room ..	552	171	1,152
2 room ..	2,084	1,788	1,725
Persons per room	1·79	1·69	1·67

No official information given for this enquiry. Use has been made of a survey of a small area made by the Scottish Survey Committee, an independent enquiry organization.

The first observation of this committee is " Citizens who see the number of houses being built by the Corporation may, and often do, think that the worst of the evils have been dealt with, and that the time has now come for a process of slowing down. The facts stated in this Report show that the time has not yet come."

St. Andrew's Ward

The area surveyed was in St. Andrew's Ward.

443 families were visited.

235 show overcrowding of more than 2 persons per room.

The families visited were those on the visiting list of the Child Welfare centre.

This is, from a statistical point of view, unfortunate. The sample is not random.

Several conclusions may be drawn as to the effect of such a sample having been taken.

1. Obviously, all the families contain children under 5.
2. Therefore, practically all will necessarily be of 3 persons or more.
3. It is a debatable point whether the sample will contain an undue proportion of good cases owing to the fact that it will contain a large proportion of youngish married people, or an undue proportion of bad cases owing to there being a large number of children. The former seems more probable in view of the low figure arrived at for overcrowding on the sex separation standard.

The following table gives a general picture of the area.

			Overcrowded on Registrar-General's Standard*	Not Overcrowded on Registrar-General's Standard*
Families living in	1 room	218	132	86
	2 rooms	151	93	58
	3 rooms	51	10	41
	4 rooms	16	0	16
	5 rooms	4	0	4
	6 rooms	3	0	3
		443	235	208

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* The term Registrar-General's standard has been used here as meaning a standard of 2 *adults* per room, as in many other surveys.

The 235 Overcrowded Families

Families overcrowded on Registrar-General's Standard* of over 2 per room	235
Families overcrowded on standard of more than 3 adults per room	99
Families overcrowded on mixing of sexes standard	42
Families overcrowded on bedroom standard.	107

It should be noted that the fact that only families with young children were visited makes the overcrowding on the sex separation standard lower than it would be from a random sample.

Also, the number of families overcrowded on bedroom standard is low because practically every room has, perforce, to be a bedroom.

The 235 families occupy 346 rooms, and consist of 1,373 persons.

5·8 persons per family
4·0 persons per room
1·47 rooms per family
0·25 rooms per person

Whole Survey

443 families visited.

Total number of rooms 775

Average number of rooms per family 1·75; average number of persons per room therefore well over 3.

Information as to earnings was obtained from 407 families, the average gross income per family was 50s. 8d.; 107 were out of work.

Reports of Individual Houses

"'Single end' found to be in a very bad state of repair. The walls were very dirty and required stripping and repapering. The wood floor was broken in places and required thorough overhauling and repairing. Water had penetrated through the ceiling from the cistern overhead. The tenant said that the landlord would do no repairs. There was no oven, and the only cooking facilities were the open grate and a gas ring. The chimney was smoking. Food was kept in an open turned-up packing case. There was very little room for furniture. In the lobby outside was one sink and one w.c., shared by four families. The rent paid for this one room was 3s. 10d. weekly or 15s. monthly . . . people sleeping on the stairs and landings, and that he had even found them sleeping in the w.c."

"House in Church Street.—These two rooms are in one of the oldest type of staircases; the whole is now very dilapidated. The rooms were dirty and very damp, and required redecorating. The roof was leaking. The tenant complained that everything in the dresser went green with mould. In the kitchen is a small cupboard, the back of which forms one wall of the common w.c. on the staircase. This partition was in a very bad state of repair and the tenant complained bitterly of the smells that penetrated into the room from the close proximity of the w.c. This is used by 18 people."

Rents

Rents paid for slum dwellings:—

Average for "single ends," i.e., 1-room houses, 3s. to 3s. 6d.; 2 rooms, 5s. 6d.

Rents charged for new houses:—

3-roomed houses, 13s. (7s. 6d. for those removed from insanitary houses).

4-roomed houses, 15s.

2-roomed houses — (5s. 11d. for those removed from insanitary houses).

The Council houses are obviously outside the means of most of the slum dwellers.

But they could nearly all afford more than they pay now.

What is Being Done

1,500 houses a year are being built by the Corporation.

The Edinburgh Welfare Housing Trust builds 3-bedroom cottages and flats, with sitting-room and kitchenette, in City and suburbs, and charges 8s. 6d. to 9s.

These houses are good. Rooms large and airy. Cottages have gardens. Adequate bedrooms. No beds allowed in living rooms.

The Housing Trust devotes special attention to large families.

The Problem

The problem of distance from work and cost of transport not very great.

There is plenty of room half an hour's journey out.

Rents must be at most 7s. 6d. for 3-bedroomed houses. This means a subsidy which the City can afford.

Difficulty of historical houses. The chief cause of the filthy conditions is the large number of very big houses let off. In some cases there are three or four landlords on the staircase. Mr. Howard Marshall mentions that in the house in which Smollett used to lodge there are 41 apartments, containing 150 people, using a single staircase. (*Daily Telegraph*, March 3, 1933.)

Infantile Mortality Rates, 1930

City	82 per 1,000
Canongate	108
St. Andrew's (121 in 1929)	108
Morningside	13
St. Bernard's	36

The Council has built 7,000 houses in 10 years, but the Infantile Mortality Rate shows no great change.

Finance

Edinburgh can well afford to tackle her slums. 1d. rate brings in £20,000, and the rates are only 8s. 6d.

If the difference between the rent charged and an "economic" rent is taken at £26 per annum, a penny rate would subsidize 750 houses. 1s. 6d. on the rates would thus subsidize 13,500. This is approximately the figure arrived at below as the probable number of houses required to abate overcrowding at over 2 per room and replace the slums. But allowance has not been made for buying sites and/or rebuilding on them. Adequate evidence on this is not available.

Conclusion

In the case of the Scottish towns, the present overcrowding is so appalling that we take the Registrar-General's Standard instead of the 1½ persons per room standard.

15,185 people living over 4 per room (assume average 5) have 3,000 rooms. They should have 7,500, and therefore need another 4,500.

28,708 people living 4 and over 3 per room (assume average 3½) have 8,200 rooms. They should have 14,350, and therefore need over 6,000 more.

72,841 people living 3 and over 2 per room (assume average 2½) have little over 29,000 rooms, and should have nearly 36,500. They need rather under 7,500 more.

Merely to prevent overcrowding at *over 2* per room requires, on the basis of these figures, 18,000 rooms.

If all the overcrowded houses were unfit the figure would be 58,000.

In the case of the English towns, the figures corresponding to these were raised by 25% to allow for the impossibility of housing people exactly at the prescribed level.

In the case of the Scottish, the same percentage is used.

The figures then become 22,500 and 72,500.

In the case of the English towns we have followed the principle of taking the geometric mean of these minima and maxima, as giving allowance for the proportion of unfit houses—both among those overcrowded, and not overcrowded. This mathematical approach has been adequately substantiated by estimates arrived at in other ways.

For the Scottish towns the overcrowding standard has been made less strict, but we must not make our definition of unfit for habitation any less strict. We must therefore take, *as a general rule*, a higher figure than the geometric mean.

In the case of Edinburgh, however, a great part of the trouble is caused by large houses, many of which need reconditioning rather than demolition. They are very overcrowded, but our minimum figure allows for this. On balance, therefore, it is probably just, in the case of Edinburgh, to follow the usual rule. A figure of 40,000 rooms or 13,000 houses is thus obtained.

This figure represents the number of houses required to reduce overcrowding to not more than 2 per room, and clear the slums. Moreover, it must be accompanied by a considerable amount of reconditioning. And a family of man, wife, adult son and adult daughter living in a kitchen and a bed-living room would not be supplied, on this plan, with any more rooms.

If we took the 1½ persons per room standard, which means 2 or 3 persons being given 2 rooms, 4 persons 3 rooms, and 5 persons 4, it is likely that our 13,000 houses would become something like 23,000 houses.

The "should have" figures above are increased to 10,000, 19,000 and 48,000. Total 77,000. The "have" is still the same—40,000.

The "minimum" becomes 37,000 + 25%, i.e., 46,000.

The "maximum" is 96,000.

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* See note on page 425.

But we have not yet made provision for those living at 2 and over 1½. They must number 100,000 at the least, and they have about 57,000 rooms instead of 67,000. Their minimum wants are 10,000+25%, i.e., 12,500. Their maximum wants are 67,000+25%, i.e., 84,000.

If we took the " 1½ " standard, therefore, we could not arrive at a lower figure than 58,000–180,000. The geometric mean of these is about 100,000. On the same considerations as were noted above, this might be reduced somewhat, say, to 90,000.

These houses would have to be larger than the 13,000 envisaged above, so their number would be, perhaps, 23,000.

This figure has been arrived at by making a very large number of assumptions, and it is quite certain that the cumulative effect of having always made the assumptions " conservative " has been to arrive at a figure many thousands below the true one.

But, in the case of the three Scottish towns, overcrowding at the higher levels is so much more prevalent than in England, that a start must be made on a " not over 2 per room " basis, besides clearing away the insanitary houses.

DUNDEE

GENERAL POSITION

Area		6,607 acres		
Population 1921		168,315		
1931		175,585		(23,000 unemployed)
Decennial increase in population		7,270		
Decennial increase in occupied dwellings		4,027		

1931	Persons per acre	26·6		
	Population in private families	171,435		
	Structurally separate dwellings occupied	46,229		
	Average size of occupied dwellings	2·66 rooms		
	Persons per room	1·40		
1921	Population in private families	164,336		
	Structurally separate dwellings occupied	42,202		
	Persons per room	1·51		
	Average size of occupied dwellings	2·58 rooms		
1931	Persons living more than 4 per room	7,862	or	4·6%
	Persons living 4 and over 3 per room	14,576	or	8·5%
	Persons living 3 and over 2 per room	37,850	or	22·1%
	Total over 2 therefore	60,288	or	35·2%

The One- and Two-Roomed Houses

14,588 people (8·5%) live in one-roomed houses, which number 6,347 (13·7% of all houses).

81,824 people (47·7%) live in two-roomed houses, which number 22,252 (48·2% of all houses).

315	families living 6 or more in 1 room
42	families with 8 or more in 1
4	families with 10 or more in 1
922	families living 8 or more in 2 rooms
154	families with 10 or more in 2
11	families with 12 or more in 2

The Wards

Number of Wards in City	11
Number of Wards containing over all average of over 1 person per room	9
Number of Wards containing over all average of over 1½ persons per room	5

Three Worst Wards on Persons Per Room Standard

	Sixth	Eighth	Third
Population in private houses ..	16,120	18,720	16,184
Living over 4 per room	1,183 (7·3%)	1,188 (6·3%)	1,114 (6·9%)
Living over 2 per room	7,298 (45·3%)	7,326 (39·1%)	6,801 (42·0%)
Structurally separate dwellings occupied ..	4,211	5,217	4,360
1 room ..	952	996	694
2 room ..	2,095	2,744	2,347
Persons per room	1·67	1·59	1·58

Number of houses condemned. About 2,000

Number of Improvement Areas and Clearance Areas

34 Clearance Areas have been dealt with during the past 5 years or are in course of being dealt with now.

2 Improvement Schemes have been carried out in the past 5 years.

The following statistics relate to a *typical* slum area of 2·23 acres :—

Houses—269 occupied and 45 vacant—total 314

Population—947

Density—120 houses per acre
425 persons per acre

(" Houses," here, means dwellings, of course.)

Number of Houses Built in connection with Improvement or Clearance Schemes

344 new houses have been completed in connection with Improvement Schemes.

Approximately 500 houses are being constructed now in connection with Clearance Schemes.

Rents of New Houses

Rents are 4s. 9d. for two rooms to 5s. 9d. for three, *exclusive*.

Rates are about 6s. in the £.

Rents of Slum Houses

The rents of the slum houses varied from 3s. for two rooms to 6s. for three.

Type of New Houses

The new houses contain bathroom with fixed back w.c. and washhand basin, kitchenette, larder and coal bunker, in addition to 2 rooms or 3 rooms, according to type. The new houses are built in blocks of flats, 3 storeys high, 24 per acre. (The rents paid are nowhere near " economic rents." They are subsidized by the Fleming Trust, as well as by the central and local finances.)

Reaction of Slum Dwellers to New Environment

" So far, experience shows that the reaction of the slum dweller has been all to the good. Without too strict supervision or official interference with the ordinary family life, the slum dweller is certainly responding to the new environment by keeping the houses tidy and the gardens in order." (Official.)

CONCLUSION

As in the case of Glasgow and Edinburgh, a 2 per room standard is used in the calculation of the housing needs of Dundee.

7,862 people living over 4 per room (assume average 5) have 1,500 rooms. They should have 3,900 and therefore need another 2,400.
14,576 people living 4 and over 3 per room (assume average 3½) have less than 4,200 rooms. They should have over 7,200, and therefore need well over 3,000 more.
37,850 people living 3 and over 2 per room (assume average 2½) have 15,000 rooms. They should have 19,000 and therefore need 4,000 more.

On the basis of these figures, the minimum needs are 9,500 and the maximum 30,000. Raised by 25% they become 12,000 and 37,000.

In the English cities the geometric mean rule has been followed. But this formula is not applicable where the minimum and maximum are related to a 2 per room standard. So that it seems likely that we ought to take a figure nearly as high as the above "maximum," in order to make due allowance for the insanitary dwellings at present overcrowded and not overcrowded.

By taking a figure of 35,000 rooms required, we are assuming some 23,000 rooms unfit. That would not be greater than the figure which would be the difference between the geometric mean and the "minimum" on the 1½ per room standard.

So that to prevent overcrowding at over 2 per room and to replace all the insanitary houses, would need some 12,000 houses at least. On English standard a figure of over 20,000 would be arrived at.

SUMMARY

The following figures represent the results arrived at prior to the consideration of Edinburgh and Dundee :—

Population 6,499,677
300,760 living over 3 per room.
1,593,649 living over 1½ per room.*
348,250 rooms required merely to abate overcrowding at over 1½ per room.*
339,500 houses required altogether.

The analysis of Edinburgh gives the following results :—

Population 439,010.
43,893 living over 3 per room.
116,734 living over 2 per room.
22,500 rooms required merely to abate overcrowding at over 2 per room.
13,000 houses required altogether (to abate overcrowding at over 2 per room and replace all insanitary houses. On English standard 23,000 would be required).

The analysis of Dundee gives the following results :—

Population 175,585.
22,438 living over 3 per room.
60,288 living over 2 per room.
12,000 rooms required merely to abate overcrowding at over 2 per room.
12,000 houses required altogether (to abate overcrowding at over 2 per room and replace all insanitary houses. On English standard 20,000 would be required).

Totals for Fourteen Cities

Population 7,114,272.
367,091 living over 3 per room.
1,770,671 living over 1½ per room.*
382,750 rooms required merely to abate overcrowding at over 1½ per room.*
364,500 houses required altogether.

●

We have, therefore, examined so far the housing conditions of well over 7,000,000 people.

1 in 20 are living at over 3 persons to the room.

Practically 1 in 4 are living at over 1½ to the room (England and Wales), or over 2 to the room (Scotland).

The requirements of these cities are :—

At least 364,500 houses (if all people are to be given sanitary houses and no one housed over 1½ per room in England and Wales or over 2 per room in Scotland).
At least 412,500 if no one is to live in an insanitary house, or at over 1½ per room.

The catalogue is made up as follows:—

City.	Houses Wanted.	
Liverpool	50,000	
Leeds	70,000	
Manchester ..	30,000	
Birmingham ..	50,000	
Sheffield	27,000	
Glasgow	55,000	(85,000 really)
Stoke	12,500	
Bristol	6,000	
Hull	6,000	
Cardiff	5,000	
Newcastle	13,000	
Bradford	15,000	
Edinburgh ..	13,000	(23,000 really)
Dundee	12,000	(20,000 really)
	364,500	(412,500 really)

Two of the sixteen remain—London and West Ham. These are to be dealt with in a subsequent memorandum, at the conclusion of which the results of the whole enquiry will be concisely summarized.

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* Over 2 for Scottish cities.

OUR SECRETARIES

• 15 •

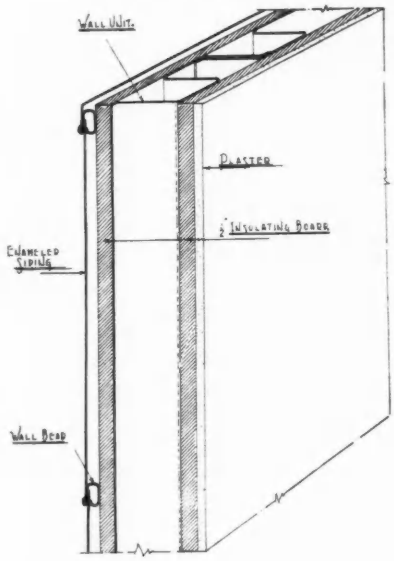
C. CROFT

NORTHAMPTONSHIRE, BEDFORDSHIRE AND HUNTINGDONSHIRE ASSOCIATION OF ARCHITECTS

MR. C. CROFT, F.S.I., was articled to the late Mr. John Ingman, of Northampton, in 1910. He passed the Final Examination (Quantities) of the Chartered Surveyors' Institute in the same year and was elected a Fellow in 1920. In 1911 he was elected a Licentiate of the R.I.B.A.

After spending a number of years in public and private offices Mr. Croft started practice in Northampton in 1910. Early in the war he joined the Inns of Court O.T.C., received a commission in the Royal Engineers and, after the Armistice, was demobilized with rank of Captain. After the war he entered into practice with Mr. S. F. Harris, F.R.I.B.A., under the style of Law, Harris and Croft of Northampton.

Mr. Croft has occupied the position of hon. secretary of the Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects since 1921.



TRADE NOTES

[BY F. R. S. YORKE, A.R.I.B.A.]

Mass-produced pressed steel houses

IN the twelfth of the series of articles entitled "What is to be Done About This?" published in THE ARCHITECTS' JOURNAL for June 29 last, "Penates" discussed the mass-produced pre-fabricated house, and pointed out that standard models were shortly to be put on the American market.

Several types of pre-fabricated house have been shown at the Chicago Century of Progress Exhibition, and some manufacturers have a complete producing and selling organization and, I believe, orders are being placed.

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An electrically welded frameless steel house, designed by Robert Smith, architect, for American Rolling Mills is one example. It is fabricated from rolled sheet steel, without rolled structural sections. Seventy-five per cent. of the work consists of prefabrication in the factory, and 25 per cent. assembly and finishing on the site. The house can be roofed within eight hours, and finished in 15 to 18 working days from the time the sections are delivered on the site.

•

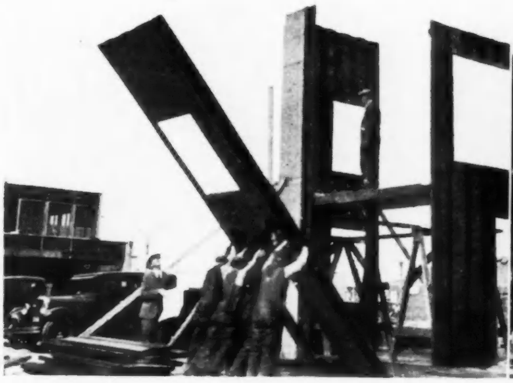
Twenty-gauge hot-rolled steel sheets are sheared to length at the steelworks. Three standard lengths only are required—one for the first storey, one for the second, and one for the parapet wall. Box-like corrugations or channels, 2 ins. deep by 6 ins. wide, are pressed longitudinally in the sheets, forming reverse channel bends to lend strength and rigidity in a vertical direction (see diagram overleaf). In large volume production these sheets will probably be formed by a rolling operation, thereby materially reducing cost.

•

Wall sheets are in four standard widths: 3 ft. 1 in., 2 ft. 1 in., 1 ft. 1 in., and 7 ins., the odd inch in each case affording welding surfaces. Window and door frames are formed from 16 gauge furniture steel.

•

Walls are fabricated in the factory into large sections, room-wide and storey-high, or as large as can be conveniently handled. In the assembly of each wall section the part containing either doors or windows is fitted first. Then an angle iron is fastened to the floor to serve as a guide; and the unit containing door or window is laid in position on the ground. Sufficient standard wall sheets are taken from stock to complete the unit of wall section under assembly. Sheets on either side of the door or window unit are inserted in open-sided channel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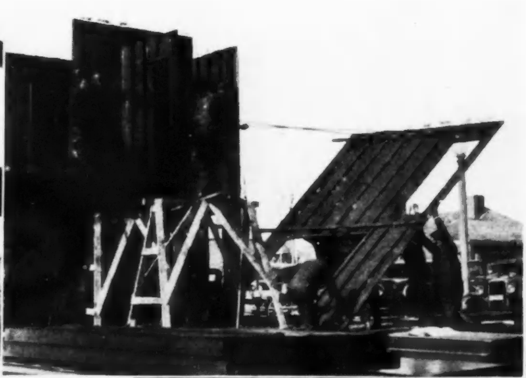
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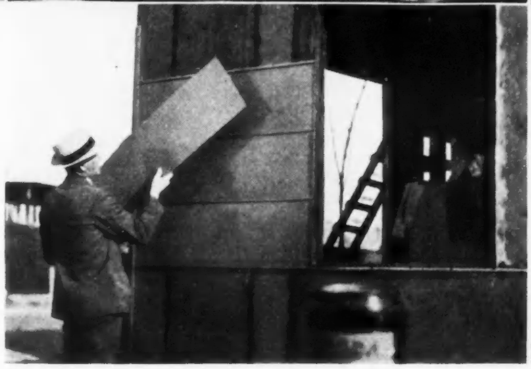
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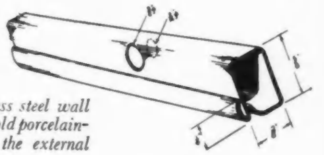
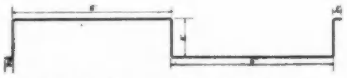
1 : *House-high wall sections, up-ended on a concrete foundation, are held in position by the first floor.*

2 : *Composite wall sections, 11 ft. by 19 ft. 6 ins., are fixed by eight workmen in a few minutes.*

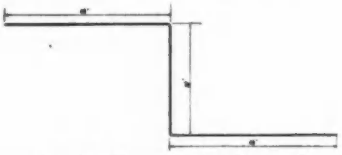
3 : *Porcelain enamel panels are slipped into grooved metal strips to form the permanent external wall finish.*



A section of stainless steel wall bead, designed to hold porcelain-enamel plates on the external wall face.



Standard pressed steel wall unit.



Standard pressed steel floor unit.

members fitted in the grooved frames ; the remainder are lapped, and when all measurements have been checked the pieces are welded together to form an integral unit. Wall-section welds are about ⅝ in. long and 12 ins. apart, and require about 5 seconds to fuse.

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Cutting is avoided, because adjustment in width may be accomplished by telescoping the wall sheets before welding. Where the telescope occurs, a hollow, box-like column is formed ; this adds strength to the wall, and is essential in certain cases.

●

Lateral rigidity is imparted to each wall section, after assembly, by welding a header strip at top and bottom. Each section is then given an erection number and stored until needed on the site. Finished external walls are 4 ins. thick.

●

Compressed fibre insulating board is applied on each side of the metal wall sheets and held securely by specially tempered, helically threaded nails, that easily penetrate the metal. Grooved strips of rustless steel are fastened horizontally on the outer face, and into these porcelain enamelled panels are inserted. Two coats of insulating plaster are applied over the inner layer of insulating board.

●

Ceilings are finished with acoustic tiles, cemented to the underside of the structural floor with a special acoustic adhesive. Floors are covered with hardwood, laid over sound deadening felt. The roof is insulated by a 2 in. thickness of compressed fibre board.

●

An oil-burning forced-air heating plant is fitted in the basement. Air is filtered and distributed through Uni-Flo grille registers to every room.

●

Floors are formed from eighteen-gauge hot-rolled steel sheets, 28 ins. wide, formed into elongated Z or step shapes, with two parallel "treads" 11 ins. wide, and the vertical web, or riser, 6 ins. high. Each Z sheet is lapped 1 in. longitudinally over the adjoining Z, and welded to form a series of metal boxes 6 ins. by 10 ins. which, while structurally flexible and light in weight, possess great strength. This strength is derived chiefly from the method of fabrication, the web being stayed in its entire length on a horizontal plane by the legs of the Z sections. When the repetition of these sections is discontinued, an L-shaped piece is inserted on either side of the floored area to complete the side boxes. The welds are spaced at approximately 24 ins.

At first the floors were field-welded piece by piece. Later it was discovered that after a sufficient area had been laid to provide an adequate working floor, much time could be saved by welding four sheets into a large section before sliding the section into place. This led to the conclusion that the floors could be factory assembled into sections of a convenient handling size. The assembled floor weighs 6.18 pounds per square foot.

●

The structural core of the roof is similar to that of the floor. A top dressing of asphalt covers the 2 in. thickness of insulating board that is laid over the rolled steel sheets. Rectangular slate slabs, ¼ in. thick, are embedded in the asphalt to provide a walking surface.

●

The porcelain enamel finish on the external wall-facing sheets is said to be so durable that the house should never need-repainting.

Wall Plugs

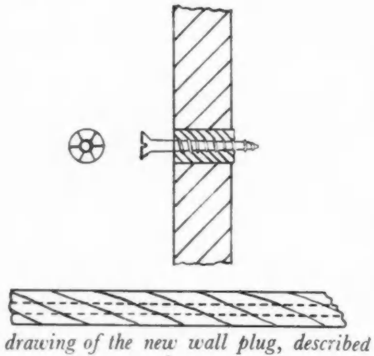
A new wall plugging system that is, I understand, to be placed on the market in a few weeks, was explained to me by its inventor a day or two ago. The plug is made from non-corrosive aluminium silicon alloy (95 per cent. aluminium), and will be supplied in tube form in two or three feet lengths, from which plugs of the size required may be cut without waste. Its circular section is built up from six strips, spirally interwoven into a tubular form. This form is maintained as long as the length of the composite strip exceeds three or four inches ; with a smaller length the spirals fall apart, since they are not bound together by jointing or adhesive.

●

The workman drills his hole, inserts the end of the tube, and cuts off the required length where the tube enters the drilled surface. The short metal sections are then free to expand and exert pressure on the sides of the drilled hole when the screw is driven.

●

The screw cuts its own thread in the aluminium, giving a permanent threaded plug that can be reused after this screw has been withdrawn, so that fittings in public buildings, hospitals, etc., can be easily removed from the walls for annual spring cleaning or decorating and replaced by the workmen engaged in these operations. The metal is not likely to attract moisture and the screw should be free from corrosion.



A drawing of the new wall plug, described above.

Stainless steel screws, now in common use, may be used with the plug for exterior work and for bathrooms, where moisture is encountered.

●

Large sections, ⅜ in. and upwards, will be made to take coach screws or Whitworth bolts and set screws.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue :—

National Provincial Bank, Coventry (pages 411-413). General contractors, J. W. Stamp & Co. Sub-contractors : Bath and Portland Stone Firms, Ltd., Portland stone ; Patent Victoria Stone Co., patent stone ; Brookes, Ltd., granite ; J. Slater & Co., Ltd., and the Clyde Oil Fuel System, Ltd., heating ; Crittall Manufacturing Co., Ltd., metal windows ; Birmingham Guild, Ltd., Staybrite steel—doors, shop fronts, etc. ; J. R. Pearson (Birmingham), Ltd., laylights ; G. and A. Brown, fibrous plaster and stone carving ; Widnes Foundry Co., Ltd., constructional steelwork ; Helical Bar and Engineering Co., Ltd., reinforcements ; Mellowes & Co., roof lights ; Hollis Bros. and Co., Ltd., wood block flooring ; Concrete, Ltd., portico ceiling ; Anselm Odling and Sons, Ltd., marble ; Proctor and Lavender, bricks ; Roberts, Adlard & Co., Ltd., slates ; Leeds Fireclay Co., Ltd., and the City Iron Co., sanitary fittings ; Kontite Fittings, copper tubing ; Smith, Major and Stevens, Ltd., lifts ; Rust's Vitreous Mosaic Co., floor and wall linings in lavatories ; W. J. Furse & Co., electric lighting, etc. ; Falk, Stadelmann and Co., Ltd. electrical fittings ; J. W. Stamp & Co., joinery ; Maple & Co., furniture specially designed by architects; Chubb and Sons Lock and Safe Co., Ltd., night deposit safe.

House at Luddesdowne, near Cobham, Kent (page 419). General contractors, G. E. Wallis and Sons, Ltd. Sub-contractors : Central Joinery Co., Ltd., flush doors and Plymax front door ; Bratt Colbran & Co., interiors to bedroom fires ; Yannedis & Co., ironmongery ; Pilkington Bros., Ltd., glass dome light ; British Reinforced Concrete Engineering Co., R.C. reinforcement ; Dorman Long & Co., Ltd., steelwork ; Limmer and Trinidad Lake Asphalte Co., Ltd., asphalte ; Frazzi, Ltd., Paropa flat roofing ; Ruberoid Co., Ltd., Ruberoid for garage roof and flat over staircase ; H. W. Dutton & Co., Ltd., supplied boiler calorifier and radiators ; W. James & Co., Ltd., metal windows ; Leeds Fireclay Co., Ltd., sanitary fittings ; Vigers & Co., Ltd., oak flooring ; M. & R. Moore, Ltd., marble for fireplaces ; Chamberlain, Thermalume petrol-air gas installation ; London Brick Co. and Forders, Ltd., bricks.

Shop at Wolverhampton (page 424). General contractors, Wilson Lovatt and Sons, Ltd., who were also responsible for interior fittings in the shop. Sub-contractors : A. Edmonds & Co., shop windows and roller blinds ; James Gibbons, Ltd., Anodium alloy fittings, steel windows, locks and furniture.

Our Secretaries

MR. LOUIS F. GIRON

Mr. Louis F. Giron, Hon. Secretary of the Royal Institute of the Architects of Ireland, in a letter to the Editor regarding No. 12 of the series *Our Secretaries*, writes : "The statement that I was elected President of the R.I.A.I. for the session 1924–25 is incorrect. I was elected President of the Architectural Association of Ireland for session 1924–25."

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

Plans passed by the BANSTEAD U.D.C. : Two houses, Commonfield Road, for Messrs. Lawes, Cherry & Co., Ltd. : 52 houses, Woodmansterne Manor Estate, for Messrs. F. H. Ayling, Ltd. ; two houses, by-pass road, for Messrs. Dales : Blue Anchor P.H., Tadworth, for Messrs. Page and Overton ; four houses, by-pass road, for Messrs. Dales ; dairy, Brighton Road, Kingswood, for Mr. A. J. Farley ; 15 houses, by-pass road, for Mr. E. A. Hilton ; six houses, West Drive, for Messrs. G. W. Harrison, Ltd. ; two houses, Fir Tree Road, for Mr. R. A. Riley ; 12 houses, Manor Way, for Mr. T. Barden ; four houses, Manor Way, for Mr. D. A. Davey.

Plans passed by the BENFLEET U.D.C. : Two houses, Kiln Road, Thundersley, for Mr. H. Budd ; 14 houses, Cranbrook Avenue, Thundersley, for D. and S. Housing Co. ; seven houses, Broughton Road and The Crescent, Hadleigh, for Mr. W. A. Keepence ; two houses, Grand View Road, Thundersley, for Mr. C. Bambury ; alterations to premises, London Road, Hadleigh, for Mr. W. Keepence.

The CAMBERWELL B.C. recommends the tender, £49,435, of Messrs. Galbraith Bros., Ltd., of Camberwell, for extensions at the Town Hall in accordance with the plans of Messrs. Culpin and Bowers.

Plans passed by the CARSHALTON U.D.C. : Hall, Baptist Free Church, Banstead Road, for the Pastor and Deacons ; four houses, Hillfield Estate, for the Hillfield Estate Co. ; 16 houses, Fryston Avenue, for Mr. L. White ; office, 60, Ruskin Road, for Mr. R. Wormald ; two houses, Colston Avenue, for Mr. P. Acford ; five houses, Acre Lane, for Mr. E. W. Scrachley ; warehouse, etc., Wrythe Lane, for Messrs. C. A. Smallbone, Ltd. ; shops, Wrythe Lane, and Rose Hill, for Mr. A. J. Butcher ; conversion of house into flats, 10, Ruskin Road, for Mr. W. Atkinson ; shop, Westmead Road, for Messrs. W. C. Southey, Ltd.

The CARSHALTON U.D.C. has obtained sanction for a loan of £42,000 for the purchase of the Oaks estate, for recreation and other purposes.

The CARSHALTON U.D.C. is to proceed with the clearance of the Avenue Road area, and erect 76 houses.

Messrs. P. Chase Gardener & Co., Ltd., of 269, High Street, Hounslow, are to erect 34 houses on an estate off Wellington Road, HOUNSLOW.

Mr. T. Wareham, of Heston Road, Heston, is to build 29 houses in London Road, ISLEWORTH.

Messrs. Goodsites, Ltd., of 90, Gresham House, E.C.2, are to erect 13 shops, 15 maisonettes, and 27 garages, in London Road, ISLEWORTH.

Messrs. G. Wimpey & Co. are constructing roads and sewers on the Coombe Farm estate, MALDEN, for Messrs. E. and L. Berg. Over 240 houses are to be erected.

Plans passed by the RUISLIP-NORTHWOOD U.D.C. : Six houses, Hazelwood Drive, for Messrs. Grace and Hughes ; two shops, Pinner Road, for Mr. C. Claydon ; estate development, off Clack Lane, for Mr. W. L. Carr, on behalf of Headstone Manor Estates ; estate development, off Joel Street, for Messrs. Harry Neal, Ltd. ; two houses, Pinner Road, for Mr. W. J. Gregory ; 324 houses, Manor Homes Estate, for Messrs. George Ball (Ruislip), Ltd. ; 12 houses, The Fairway, for Mr. J. Pollitt ; two bungalows, Pembroke Road, for Mr. J. H. Sagar ; six houses, Hazelwood Drive, for Messrs. R. Fielding and Son ; dairy, Park Farm, for Messrs. C. M. Roberts and Son ; extension, St. Helen's School, Eastbury Road, for Messrs. Ward, Hoare and Wheeler ; seven bungalows, Hillside Road, for Messrs. George Ball Estates, Ltd. ; two houses, Evelyn Avenue, for Messrs. Marks and Gullett ; two houses, Hardy Avenue, for Mr. H. J. Pointing.

Plans passed at SANDERSTEAD : New road, off Kingswood Lane, for Messrs. Hooker and Rogers ; two flats, Old Rectory, for Mr. H. W. Crickmay ; three shops, Addington Road, for Mr. J. A. Lovell ; additions, Baptist Hall, Selsden, for Mr. F. S. Smith.

SOUTHERN COUNTIES

Plans passed by the SLOUGH U.D.C. : Two factories, Buckingham Avenue, for Slough Estates, Ltd. ; four houses, Chalvey Grove, for Mr. J. W. Holdway ; three shops, Faraday Road, for Mr. F. G. Smart ; five houses, Bath Road, Langley, for Mr. B. E. Smith ; three shops and flats, Meadfield Road, Langley, for Mr. A. T. Ricketts ; workshop, Buckingham Avenue, for High Duty Alloy, Ltd. ; factory, St. Mary's Road, Langley, for Mr. J. L. Thompson ; seven houses, Bath Road, and two houses, Langley Road, for Mr. G. Wrightson-Ibbs ; boiler house, Fairlie Road, for Mars Confections, Ltd.

SOUTH-WESTERN COUNTIES

Plans passed by the SWINDON Corporation : Dairy, etc., 152 Drove Road, for Messrs. A. and G. Blackwell ; alterations, 5 County Road, for Ushers Wiltshire Brewery, Ltd. ; two houses, Downs View Road, for Messrs. Tydeman Bros. and Sons, Ltd. ; two houses, Downs View Road, for Messrs. Pope Bros. ; two houses, Cheney Manor Road, for Mr. F. F. Jefferies ; additions, 104 Broad Street, for Messrs. R. J. Beswick and Son ; house and shop, Cricklade Road, for Messrs. Bishop and Fisher ; two houses, Marlborough Road, for Messrs. E. H. Bradley and Sons ; alterations, 59 and 60 Bridge Street, for Messrs. Bishop and Fisher ; three houses, Moredon Road, for Mr. H. G. Ferris ; alterations, 27 and 28 Regent Street, for Mr. E. W. Beard ; electricity showrooms, Regent Circus, for Mr. J. B. L. Thompson ; workshop, 5 Regent Street, for Messrs. R. J. Beswick and Son ; two houses, Whitworth Road, for Mr. F. J. Ockwell ; two shops, Princes Street, for Mr. W. H. Tydeman ; additions, off County Road, for Shell-Mex and B. P. Ltd. ; layout for 40 houses, Gipsy Lane, for Messrs. Bishop and Fisher.

NORTHERN COUNTIES

Plans submitted to the BLACKPOOL Corporation: 50 houses, Salmesbury Avenue, for Mrs. A. Gilbert ; 26 houses, Horncliffe Road, for Messrs. A. and G. R. Fletcher ; six houses, Fleetwood Road, for Mr. J. Kennard ; six shops and houses, Lomond Avenue, for Hall Estate Co., Ltd. ; three shops, offices and house, Preston New Road, for Mr. H. Best ; alterations and additions, Back Henry Street, for Blackpool Co-operative Society ; 16 houses, Walpole Avenue, for Lancashire Construction Co., Ltd. ; factory, Plymouth Road, for Associated Textile Industries (Macclesfield) Ltd.

The BOLTON Corporation has approved the lay-out of the Ferns Estate, Tudor Avenue, where 60 houses are to be erected.

Plans passed by the CARLISLE Corporation : Alterations, 8 Devonshire Street, for Messrs. A. McEwan & Co. ; shop extensions, Blackwell Road, for Mr. H. E. Scarborough ; house and shop, Lamb Street, for Messrs. Benwell and Slack ; two houses, Boston Avenue, for Mr. J. Johnstone ; two houses, Warwick Road, for Mr. H. Foxall ; extensions, 10 Portland Square, for Mr. S. W. B. Jack ; estate development, Scotland Road, for Mr. W. C. Johnston, on behalf of Messrs. W. H. Reeves and Son ; estate development, Petteril Terrace, for Messrs. H. E. Winter and Sons ; seven houses, Rosebery Road, for Messrs. Blakeley and Sons ; weaving shed, Shaddongate, for Linton's Cumberland Homespuns, Ltd. ; four houses, London Road, for Mr. Jas. Miller.

Plans passed by the DEWSBURY Corporation : Six houses, Scar End Lane, for Mr. W. R. Salisbury ; two houses, Leeds Road, for Messrs. E. Jones and Sons (Builders), Ltd. ; two houses, Chickenly Lane, for Mr. B. Spedding ; two houses, Headfield Road, for Mr. A. Fisher ; alterations, Bradford Road, for Messrs. A. Harrison and Son (Dewsbury), Ltd. ; new street, Savile Town, for Savile Estate, York.

The SCARBOROUGH Corporation has made arrangements for the work of improvements to the bathing pool at South Bay, to be commenced at the end of the summer season. The cost of the work is estimated at £7,367.

Plans passed by the SHEFFIELD Corporation : Two houses, Chesterfield Road, for Mr. H. Beardow ; four houses, High Storrs Road, for Mr. J. Vickers ; four houses, Warminster Road, for Mr. D. Richerby ; four houses, Warminster Road, for Mr. C. G. Robinson ; 12 houses, Laird Avenue, for Messrs. W. Marlow and Sons, Ltd. ; 10 houses, Harris Road, for Mr. M. Simpson ; 37 flats and seven houses, Moorfields estate, for Corporation Estates Committee ; two houses, Abbey Lane, for Mr. J. L. Conway ; eight shops and houses, Handsworth Drive, for Miss I. M. Hellewell ; 10 houses, Crimicar Lane, for Mr. J. W. Sivil ; two houses, Todwick Road, for Mr. W. A. Wright ; house and shop, Prince of Wales Road, for Mr. F. S. Storey ; 20 houses, Station Road, Woodhouse, for Netherfield Estates, Ltd. ; two houses, Stradbrooke Road, for Mr. J. D. Lyon ; six houses, Stannington Road, for Mr. A. Simpson ; two houses, Lyminster Road, for Mr. D. A. Hurrell ; six houses, Prince of Wales Road, for Mr. J. F. Bullen ; two houses, Holmhurst Road, for Mr. J. C. Mason ; two houses, Stannington Road, for Messrs. Reeves Charlesworth, Ltd. ; two houses, Mitchell Road, for Mr. F. Moody ; 14 houses, Hucklow Road, for Messrs. J. Copley and Sons ; four houses, Toftwood Road, for Mr. D. Topliss ; four houses, Abbeyfield Road, for Messrs. Longmath.

WALES

The LLANDUDNO U.D.C. has received sanction to borrow £15,423, £2,275 and £1,344 for the purchase of West Shore golf course, golf house and equipment.

The SWANSEA Corporation is to lay-out the Civic Centre surrounds, construct roads, etc., at a cost of £31,624.

Plans passed by the SWANSEA Corporation : Office, Neath Road, for Anglo-American Oil Co., Ltd. ; rebuilding, 38–9 Waterloo Street, for Messrs. Charles, Ltd. ; workshops and stores, Heathfield Yard, for Messrs. Bennett Bros. ; two houses, Bedford Street, for Messrs. Walters and Johns ; five houses, Glantawe Street, for Messrs. Walters and Johns ; additions, 86–9 Symons Street, for Mr. P. H. E. Davies ; rebuilding, 37–8 High Street, and 80–1 Orchard Street, for Messrs. Llewellyns, Ltd. ; two bungalows, Cæmawr, for Mr. D. J. Evans ; four houses, Townhill Road, for Mr. Syd Davies ; four houses, Gower Road, for Mr. A. E. Wright ; rebuilding, Malsters Arms, Carmarthen Road, for Mr. A. Thomas ; alterations and additions, 68–9 Woodfield Street, for Messrs. Woolworth & Co., Ltd. ; eight houses, Mount Pleasant, for Messrs. Rogers and Davies ; store, Quarry Road, for Messrs. Morgan Bros. ; offices, South Dock, for Wilmor Milling Co. ; two houses, Terrace Road, for Mr. A. J. Marles ; additions, Patti Pavilion, for borough engineer ; two houses, Lon Cedwyn, for Mr. R. Strawbridge ; 15 houses, Mumbles Road, for Rev. Rees Howells ; houses, Station Road, for Mr. W. Evans.

ISLE OF WIGHT

Plans passed by the NEWPORT (I.-OF-W.) Corporation : Two houses, Clatterford Road, for Mr. R. Jolliffe ; showrooms and store, Medina Avenue, for Mr. E. L. Smith ; kiln, Carisbrooke Brick and Tile Works, Gunville, for Mr. Frank Chiverton ; two houses, Gunville Road, Carisbrooke, for Mr. Frank Chiverton ; extension, rear, 104 High Street, for Messrs. F. W. Woolworth & Co. ; additions, Newport Town Police Station, for Mr. A. J. A. Harris ; extension to cement works, Blackhouse Quay, for Mr. J. H. Slater.

SOUTH AFRICA

The CAPE TOWN Corporation proposes the expenditure of £800,000, over a period of eight years, for the provision of tenement houses.

The CAPE TOWN Corporation Housing Committee is to proceed with the erection of sixteen blocks of tenements in Lion Street, at an estimated cost of £80,000.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE ..	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny ..	S. Wales & M.	1 5	1 0¾
A_3	Abingdon ..	S. Counties	1 4	1 0
A	Accrington ..	N.W. Counties	1 5½	1 1¼
A_3	Addlestone ..	S. Counties	1 4	1 0
A	Adlington ..	N.W. Counties	1 5½	1 1¼
A	Airdrie ..	Scotland	*1 5½	1 1¼
C	Aldeburgh ..	E. Counties	1 1½	10¼
A	Altrincham ..	N.W. Counties	1 5½	1 1¼
B_3	Appleby ..	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone ..	Mid. Counties	1 4	1 0
B_2	Aylesbury ..	S. Counties	1 2½	11
B_1	BANBURY ..	S. Counties	1 3	11¼
B_1	Bangor ..	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley ..	Yorkshire	1 5½	1 1¼
B	Barnstaple ..	S.W. Counties	1 3½	11¾
A	Barrow ..	N.W. Counties	1 5½	1 1¼
A	Barry ..	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke ..	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley ..	Yorkshire	1 5½	1 1¼
A_3	Bedford ..	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley ..	Mid Counties	1 4½	1 0½
B	Bicester ..	S. Counties	1 2	10½
	Birkenhead ..	N.W. Counties	*1 7	1 2¼
A	Birmingham ..	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn ..	N.W. Counties	1 5½	1 1¼
A	Blackpool ..	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor ..	S. Counties	1 2½	11
A	Bolton ..	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth ..	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford ..	Yorkshire	1 5½	1 1¼
A_1	Brentwood ..	E. Counties	1 5	1 0¾
A	Bridgend ..	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater ..	S.W. Counties	1 3	11¼
A_1	Bridlington ..	Yorkshire	1 5	1 0¾
A	Brighouse ..	Yorkshire	1 5½	1 1¼
A_3	Brighton ..	S. Counties	1 4	1 0
A	Bristol ..	S.W. Counties	1 5	1 0¾
B_3	Brixham ..	S.W. Counties	1 2	10½
A_2	Bromsgrove ..	Mid. Counties	1 4½	1 0½
C	Bromyard ..	Mid. Counties	1 1½	10¼
A	Burnley ..	N.W. Counties	1 5½	1 1¼
A	Burslem ..	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton ..	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE ..	E. Counties	1 4½	1 0½
B_2	Canterbury ..	S. Counties	1 2½	11
A	Cardiff ..	S. Wales & M.	1 5½	1 1¼
A	Carlisle ..	N.W. Counties	1 5½	1 1¼
B	Carmarthen ..	S. Wales & M.	1 3½	11¾
B	Carnarvon ..	N.W. Counties	1 3½	11¾
A	Carnforth ..	N.W. Counties	1 5½	1 1¼
A	Castleford ..	Yorkshire	1 5½	1 1¼
B	Chatham ..	S. Counties	1 3½	11¾
B	Chelmsford ..	E. Counties	1 3½	11¾
A_3	Cheltenham ..	S.W. Counties	1 4	1 0
A	Chester ..	N.W. Counties	1 5½	1 1¼
A	Chesterfield ..	Mid. Counties	1 5½	1 1¼
B_2	Chichester ..	S Counties	1 2½	11
A	Chorley ..	N.W. Counties	1 5½	1 1¼
B_2	Cirencester ..	S. Counties	1 2½	11
A	Clitheroe ..	N.W. Counties	1 5½	1 1¼
A	Clydebank ..	Scotland	1 5½	1 1¼
A	Coalville ..	Mid. Counties	1 5½	1 1¼
A_3	Colchester ..	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett ..	N.E. Coast	1 5	1 0¾
A_2	Conway ..	N.W. Counties	1 4½	1 0½
A	Coventry ..	Mid. Counties	1 5½	1 1¼
A_2	Crewe ..	N.W. Counties	1 4½	1 0½
A	Cumberland ..	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen ..	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh ..	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury ..	Yorkshire	1 5½	1 1¼
B	Didcot ..	S. Counties	1 3½	11¾
A	Doncaster ..	Yorkshire	1 5½	1 1¼
B_2	Dorchester ..	S.W. Counties	1 2½	11
A_3	Driffield ..	Yorkshire	1 4	1 0
A_2	Droitwich ..	Mid. Counties	1 4½	1 0½
A	Dudley ..	Mid. Counties	1 5½	1 1¼
A	Dundee ..	Scotland	1 5½	1 1¼
A	Durham ..	N.E. Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale ..	S. Wales & M.	1 5	1 0¾
A	Edinburgh ..	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter ..	S.W. Counties	*1 4½	1 0½
B_1	Exmouth ..	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood ..	N.W. Counties	1 5½	1 1¼
B_2	Folkestone ..	S. Counties	1 2½	11
A	Frodsham ..	N.W. Counties	1 5½	1 1¼
B_2	Frome ..	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham ..	S. Counties	1 3½	11¾
A_2	Gloucester ..	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport ..	S. Counties	1 4	1 0
A_3	Grantham ..	Mid. Counties	1 4	1 0
A_1	Gravesend ..	S. Counties	1 5	1 0¾
A	Greenock ..	Scotland	*1 5½	1 1¼
A	Grimsby ..	Yorkshire	1 5½	1 1¼
B_1	Guildford ..	S. Counties	1 3	11¼
A	HALIFAX ..	Yorkshire	1 5½	1 1¼
A	Hanley ..	Mid. Counties	1 5½	1 1¼
A	Harrogate ..	Yorkshire	1 5½	1 1¼
A	Hartlepools ..	N.E. Coast	1 5½	1 1¼
B	Harwich ..	E. Counties	1 3½	11¾
B_2	Hastings ..	S. Counties	1 2½	11
A_3	Hatfield ..	S. Counties	1 4	1 0
B	Hereford ..	S.W. Counties	1 3½	11¾
A_3	Hertford ..	E. Counties	1 4	1 0
A	Heysham ..	N.W. Counties	1 5½	1 1¼
A	Howden ..	N.E. Coast	1 5½	1 1¼
A	Huddersfield ..	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY ..	Yorkshire	1 5½	1 1¼
A	Immingham ..	Mid. Counties	1 5½	1 1¼
A_3	Ipswich ..	E. Counties	1 4	1 0
B_3	Isle of Wight ..	S. Counties	1 2	10½
A	JARROW ..	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY ..	Yorkshire	1 5½	1 1¼
B	Kendal ..	N.W. Counties	1 3½	11¾
B	Keswick ..	N.W. Counties	1 3½	11¾
A_2	Kettering ..	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn ..	E. Counties	1 2½	11
A	LANCASTER ..	N.W. Counties	1 5½	1 1¼
A_1	Leamington ..	Mid. Counties	1 5	1 0¾
A	Leeds ..	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester ..	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield ..	Mid. Counties	1 4½	1 0½
A	Lincoln ..	Mid. Counties	1 5½	1 1¼
	Liverpool ..	N.W. Counties	*1 7	1 2¼
A_2	Llandudno ..	N.W. Counties	1 4½	1 0½
A	Llanelly ..	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton ..	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham ..	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W Counties	1 5	1 0¾
B	Maidstone ..	S. Counties	1 3½	11¾
A_3	Malvern ..	Mid. Counties	1 4	1 0
A	Manchester ..	N.W. Counties	1 5½	1 1¼
A	Mansfield ..	Mid. Counties	1 5½	1 1¼
B_1	Margate ..	S. Counties	1 3	11¼
A_3	Matlock ..	Mid. Counties	1 4	1 0
A_1	Merthyr ..	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich ..	N.W. Counties	1 4½	1 0½
B_2	Minehead ..	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe ..	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH ..	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson ..	N.W. Counties	1 5½	1 1¼
A	Newcastle ..	N.E. Coast	1 5½	1 1¼
A	Newport ..	S. Wales & M.	1 5½	1 1¼
A	Normanton ..	Yorkshire	1 5½	1 1¼
A_1	Northampton ..	Mid. Counties	1 5	1 0¾
A	North Staffs. ..	Mid. Counties	1 5½	1 1¼
A	North Shields ..	N.E. Coast	1 5½	1 1¼
A_2	Norwich ..	E. Counties	1 4½	1 0½
A	Nottingham ..	Mid. Counties	1 5½	1 1¼
A	Nuneaton ..	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM ..	Mid. Counties	1 4	1 0
A	Oldham ..	N.W. Counties	1 5½	1 1¼
A_3	Oswestry ..	N.W. Counties	1 4	1 0
A_2	Oxford ..	S. Counties	1 4½	1 0½
A	PAISLEY ..	Scotland	*1 5½	1 1¼
B_3	Pembroke ..	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth ..	S.W. Counties	*1 5½	1 1¼
A	Pontefract ..	Yorkshire	1 5½	1 1¼
A_1	Pontypridd ..	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth ..	S. Counties	1 4	1 0
A	Preston ..	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING ..	S. Counties	1 4½	1 0½
B	Reigate ..	S. Counties	1 3½	11¾
A_3	Retford ..	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale ..	N.W. Counties	1 5½	1 1¼
B	Rochester ..	S. Counties	1 3½	11¾
A_1	Ruabon ..	N.W. Counties	1 5	1 0¾
A	Rugby ..	Mid. Counties	1 5½	1 1¼
A_3	Rugeley ..	Mid. Counties	1 4	1 0
A	Runcorn ..	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS ..	E. Counties	1 4½	1 0½
A	St. Helens ..	N.W. Counties	1 5½	1 1¼
B_3	Salisbury ..	S.W. Counties	1 2	10½
A_1	Scarborough ..	Yorkshire	1 5	1 0¾
A	Scunthorpe ..	Mid. Counties	1 5½	1 1¼
A	Sheffield ..	Yorkshire	1 5½	1 1¼
A	Shipley ..	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury ..	Mid. Counties	1 4½	1 0½
A_2	Skipton ..	Yorkshire	1 4½	1 0½
A_3	Slough ..	S. Counties	1 4	1 0
A_2	Solihull ..	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport ..	N.W. Counties	1 5½	1 1¼
A	S. Shields ..	N.E. Coast	1 5½	1 1¼
A_2	Stafford ..	Mid. Counties	1 4½	1 0½
A	Stockport ..	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud ..	S.W. Counties	1 3½	11¾
A	Sunderland ..	N.E. Coast	1 5½	1 1¼
A	Swadlincote ..	Mid. Counties	1 5½	1 1¼
A	Swansea ..	S. Wales & M.	1 5½	1 1¼
A_3	Swindon ..	S.W. Counties	1 4	1 0
A_1	TAMWORTH ..	N.W. Counties	1 5	1 0¾
B	Taunton ..	S.W. Counties	1 3½	11¾
A	Teesside Dist...	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth ..	S.W. Coast	1 4	1 0
A	Todmorden ..	Yorkshire	1 5½	1 1¼
A_1	Torquay ..	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall ..	Mid. Counties	1 5½	1¼
A	Tyne District ...	N. E. Coast	1 5½	1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall ..	Mid. Counties	1 5½	1 1¼
A	Warrington ..	N.W. Counties	1 5½	1 1¼
A_1	Warwick ..	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby ..	Yorkshire	1 4½	1 0½
A	Widnes ..	N.W. Counties	1 5½	1 1¼
A	Wigan ..	N.W. Counties	1 5½	1 1¼
B_1	Winchester ..	S. Counties	1 3	11¼
A_3	Windsor ..	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester ..	Mid. Counties	1 4½	1 0½
A	Worksop ..	Yorkshire	1 4	1 0
A_1	Wrexham ..	N.W. Counties	1 5	1 0¾
A_3	Wycombe ..	S. Counties	1 4	1 0
B_1	YARMOUTH ..	E. Counties	1 3	11¼
B_1	Yeovil ..	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	„		1	7
Joiner	„		1	7
Machinist	„		1	8
Mason (Banker)	„		1	7
„ (Fixer)	„		1	8
Plumber	„		1	7
Painter	„		1	6
Paperhanger	„		1	6
Glazier	„		1	7
Slater	„		1	7
Scaffolder	„		1	3
Timberman	„		1	3
Navvy	„		1	2½
General Labourer	„		1	2½
Lorryman	„		1	5
Crane Driver	„		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	„	1	16	6
Hydrated Lime	„	3	0	9
Portland Cement	„	2	6	0
Rapid Hardening Cement	„	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	„		7	6
Building Sand	„		7	9
Washed Sand	„		8	9
2" Broken Brick	„		8	3
¾" „ „	„		11	6
Pan Breeze	„		6	6
Coke Breeze	„		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	„	3	6	5	3
Rest bends	„	4	3	6	3
Single junctions	„	3	6	5	3
Double „	„	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	„	4	6	6	6
Channel tapers	„	2	9	4	0
Yard gullies	„	6	9	8	9
Interceptors	„	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	„	9	0	15	0
Single junctions	„	8	9	18	0
Double junctions	„	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	„		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	„	3	0	0
Phorpres bricks	„	2	18	0
Stocks, 1st quality	„	4	11	0
„ 2nd „	„	4	2	6
Blue Bricks, Pressed	„	9	2	6
„ Wirecuts	„	8	2	6
„ Brindles	„	7	6	6
„ Bullnose	„	9	14	0
Red Sand-faced Facings	„	6	18	6
Red Rubbers for Arches	„	12	0	0
Multicoloured Facings	„	8	8	0
Luton Facings	„	8	0	0
Phorpres White Facings	„	3	17	3
Phorpres Rustic Facings	„	3	12	3
Midhurst White Facings	„	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	„	21	10	0
Headers	„	21	0	0
Bullnose	„	28	0	0
Double Stretchers	„	30	0	0
Double Headers	„	27	0	0
Glazed Second Quality, *Less*	„	1	0	0
„ Buffs and Creams, *Add*	„	2	0	0
„ Other Colours	„	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" „ „ „	„		1	10
3" „ „ „	„		2	1
4" „ „ „	„		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
„ „ Basebed	„	4	9
Bath stone	„	2	11
York stone	„	6	6
„ „ Sawn templates	„	7	6
„ „ Paving, 2"	F.S.	1	8
„ „ „ 3"	„	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	„	24	10	0
20" × 10" Countesses	„	19	5	0
18" × 10" Viscountesses	„	15	10	0
18" × 9" Ladies	„	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
„ green	„ „	24	7	4
Best machine roofing tiles	„	4	10	0
Best hand-made do.	„	5	0	0
Hips and valleys	each			9½
„ hand-made	„			10
Nails, compo	lb.		1	4
„ copper	„		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	„ „			5
„ „ 2nds	„ „			4
Mahogany, Honduras	„ „		1	3
„ African	„ „		1	1
„ Cuban	„ „		2	6
Oak, plain American	„ „		1	0
„ Figured „	„ „		1	3
„ Plain Japanese	„ „		1	2
„ Figured „	„ „		1	5
„ Austrian wainscot	„ „		2	6
„ English	„ „		1	11
Pine, Yellow	„ „		1	0
„ Oregon	„ „			4
„ British Columbian	„ „			4
Teak, Moulmein	„ „		1	3
„ Burma	„ „		1	2
Walnut, American	„ „		2	3
„ French	„ „		2	3
Whitewood, American	„ „		1	1
Deal floorings, ¾"	Sq.		19	0
„ ⅞"	„	1	1	6
„ 1"	„	1	3	6
„ 1¼"	„	1	7	6
„ 1½"	„	1	12	0
Deal matchings ⅝"	„		14	0
„ ¾"	„		15	6
„ 1"	„	1	4	0
Rough boarding ¾"	„		16	0
„ 1"	„		18	0
„ 1½"	„	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1¼"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
„ 3"-11½" long	„	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	„	11	1/3	2/2	2/10	5/3
„ „ 3"-11½" long	„	8	10	1/5	1/11	3/6
Bends	„	8	11	1/7½	2/7½	5/2
Springs not socketed	„	5	7	1/1½	1/11½	3/11
Socket unions	„	2/-	3/-	5/6	6/9	10/-
Elbows, square	„	10	1/1	1/6	2/2	4/3
Tees	„	1/-	1/3	1/10	2/6	5/1
Crosses	„	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	„	3	4	6	8	1/3
Diminished sockets	„	4	6	9	1/-	2/-
Flanges	„	9	1/-	1/4	1/9	2/9
Caps	„	3½	5	8	1/-	2/-
Backnuts	„	2	3	5	6	1/1
Iron main cocks	„	1/6	2/3	4/2	5/4	11/6
„ „ with brass plugs	„	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	„ water	47½
Steam	57½	„ steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	„ water	42½
Steam	47½	„ steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	„	8	6
„ „ ⅜"	„	8	3
„ „ ½"	„	8	0
„ „ ⅝"	„	7	6
„ „ ¾"	„	7	6
„ „ 1"	„	7	6
„ „ 1¼"	„	7	6
„ „ 1½"	„	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	„	5	0	8	6
Boots	„	3	3	4	5
Bends	„	2	9	4	0
„ with access door	„	—		6	9
Heads	„	4	0	5	0
Swan-necks up to 9" offsets	„	4	0	6	3
Plinth bends, 4½" to 6"	„	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	„	1	7	1	11
Obtuse angles	„	2	0	2	6
Outlets	„	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	1	0
„ drawn pipes	„		18	0
„ soil pipe	„	1	5	0
„ scrap	„		13	6
Solder, plumbers'	lb.			10
„ fine do.	„		1	0
Copper, sheet	„			10½
„ tubes	„			11

L.C.C. soil and waste pipes:

		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	„	1	1	1	3	2	8
Galvanized	„	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	„	3	9	5	3	10	3
Shoes	„	2	10	4	4	0	6
Heads	„	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	„	2	10	0
„ fine	„	4	15	0
Hydrated lime	„	3	0	9
Sirapite	„	3	6	0
Keene's cement	„	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
„ rent	„		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2½
„ „ 26 oz. „ „ „	„					3½
Arctic glass, white	„					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	„					6½
¼" Hartley's rough rolled	„					7
¼" „ wired cast	„					10
¼" Georgian wired cast	„					11
¼" Polished plate, n/e 1 ft.	„		†7½	to	‡1	0
„ „ 2	„		†10	„	‡1	3½
„ „ 3	„	†1	4½	„	‡1	10
„ „ 4	„	†1	11	„	‡2	4
„ „ 6	„	†2	3	„	‡2	7½
„ „ 8	„	†2	5	„	‡3	0½
„ „ 12	„	†2	10	„	‡3	3½
„ „ 20	„	†3	3½	„	‡3	9
„ „ 45	„	†3	6½	„	‡4	0½
„ „ 65	„	†3	11½	„	‡4	4
„ „ 90	„	†4	4	„	‡4	9
„ „ 100	„	†4	6	„	‡4	11
Vita glass, sheet, n/e 1 ft.	„				1	0
„ „ „ „ 2	„				1	3
„ „ „ over 2	„				1	9
„ „ plate, n/e 1 ft.	„				1	6
„ „ „ 2	„				3	0
„ „ „ 5	„				4	0
„ „ „ 7	„				5	0
„ „ „ 15	„				6	0
„ „ „ over 15	„				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	„		2	4½
Turpentine	„		4	1½
Patent knotting	„		14	0
Distemper, washable	cwt.	3	0	0
„ ordinary	„	2	5	0
Whitening	„		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	„		14	0
Outside varnish	„		16	0
White enamel	„	1	15	0
Ready-mixed paint	„		13	6
Brunswick black	„		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
„ to reduce levels n/e 5' 0" deep and cart away	Y.C.		8	6
„ to form basement n/e 5' 0" deep and cart away	„		9	0
„ „ 10' 0" deep and cart away	„		9	6
„ „ 15' 0" deep and cart away	„		10	0
If in stiff clay	add „		2	6
If in underpinning	„ „		4	0
Digging, return, fill and ram	„ „		4	0
Planking and strutting to sides of excavation	F.S.		1	0
„ „ to pier holes	„			5
„ „ to trenches	„			5
„ „ extra, only if left in	„			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	„	1	6	0
„ „ „ (4-2-1)	„	1	12	6
„ „ „ underpinning	„	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4"		6"	
		s.	d.	s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and grating	„	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
„ „ in cement	„	29	15	0
„ Stocks in cement	„	35	15	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			5½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	„	6	9
¾" paving or flat	„	4	0
1" paving or flat	„	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	„	3	7	0
Do., 24" × 12"	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles	„	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	„	4	6	6
„ „ „ „ „ (green)	„	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" „ „ „ „	„	1	17	6
1¼" „ „ „ „	„	2	3	0
¾" × 2" fir battening for Countess slating	„		9	6
Do. for 4" gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" „ „ „ „	„		1	6
2" deal wrought rounded roll	F.R			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	„	2	12	6
1½" do.	„	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S		1	6
¾" do.	„		1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" „ „	„	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	3	9
2" „ „ „	„	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" „ „ „	„	2	8
1½" „ but moulded both sides	„	2	4
2" „ „ „	„	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" „ „	„	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½" deal moulded wall strings	„	2	1
1½" „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" „ „	„	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	6
Do. in flashings		1	18	0
Do. in covering to turrets, etc.	„	2	4	0
Do. in soakers	„	1	10	0
Labour to welted edge	F.R.			3½
Open copper nailing	„			3½
Close „ „	„			4½

		½"		¾"		1"		1¼"		2"		4"	
		s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Lead service pipe and fixing with pipe hooks	F.R.	1	0	1	2	1	5	2	1	3	0	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	3
Do. to stop ends	„		6½		8		9		11	1		—	
Boiler screws and unions	„	3	3	3	9	5	0	8	0	—		—	
Lead traps	„	—		—		—		6	3	8	9	—	
Screw down bib valves	„	6	9	9	6	11	0	—		—		—	
Do. stop cocks	„	9	0	11	0	14	6	20	6	47	0	—	

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

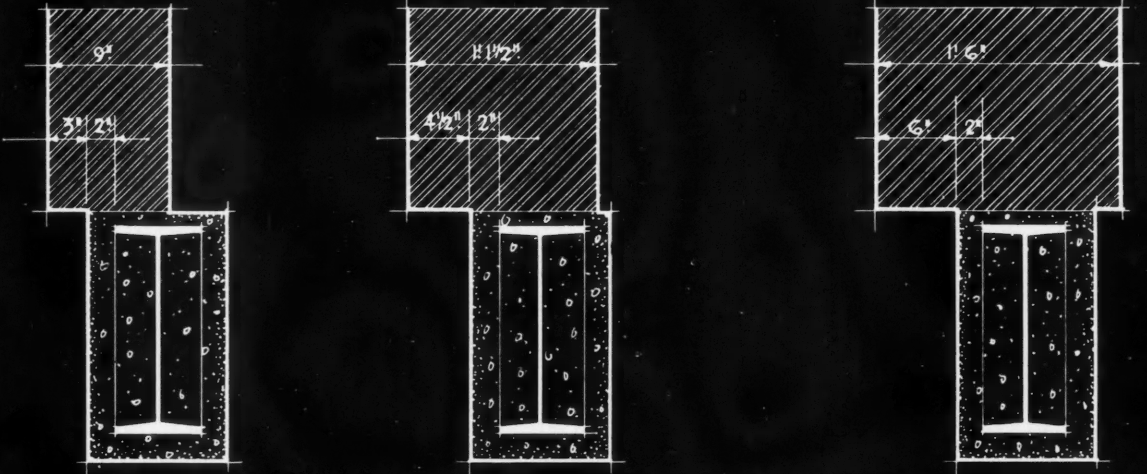
		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	9
Do. vertical	„		2	3
Rough render on walls	„		1	4
Render, float and set in lime and hair	„		2	0
Render and set in Sirapite	„		2	2
Render, backing in cement and sand, and set in Keene's cement	„		3	1
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1" girth	„			1½
1" granolithic pavings	Y.S.		3	6
1½" „	„		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	„		17	6
9" × 3" „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

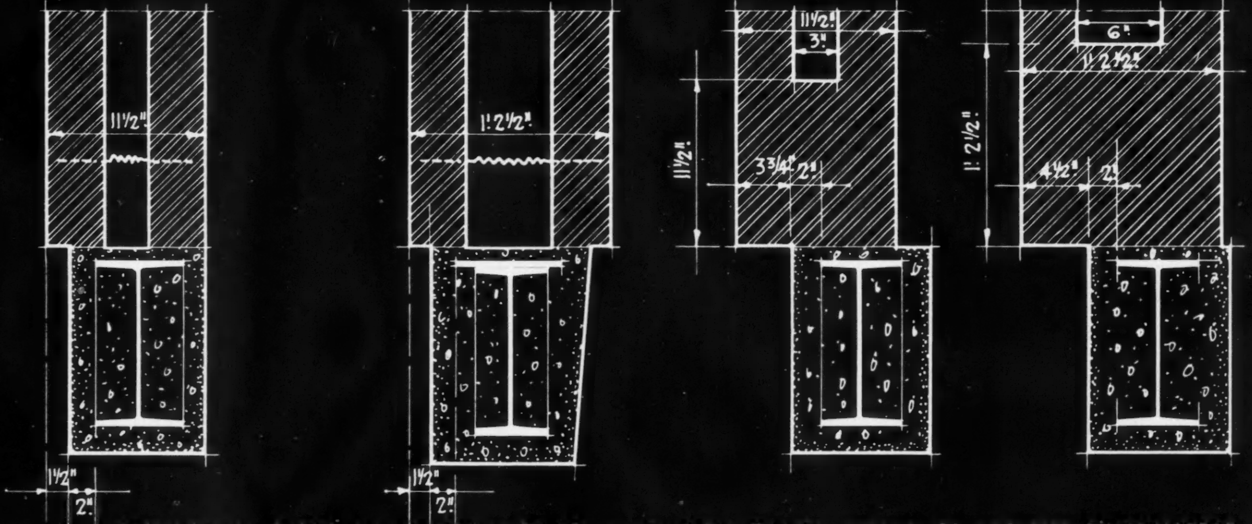
		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	„	2	9

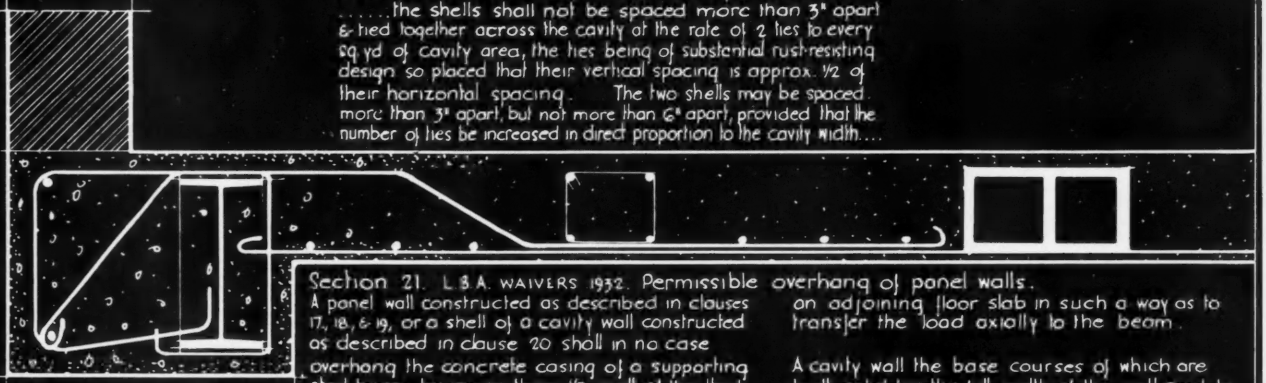


MAXIMUM OVERHANG PERMITTED IN SOLID PANEL WALLS OF VARIOUS THICKNESSES.



MAXIMUM OVERHANG PERMITTED IN CAVITY PANEL WALLS OF VARIOUS THICKNESSES.

Section 20. L.B.A. WAIVERS 1932. Cavity panel walls.
......the shells shall not be spaced more than 3" apart & tied together across the cavity at the rate of 2 ties to every sq. yd of cavity area, the ties being of substantial rust-resisting design so placed that their vertical spacing is approx. ½ of their horizontal spacing. The two shells may be spaced more than 3" apart, but not more than 6" apart, provided that the number of ties be increased in direct proportion to the cavity width....



ARRANGEMENT WHERE WALL OVERHANGS THE SUPPORTING STEEL BY MORE THAN ⅓ OF THE WALL THICKNESS

Section 21. L.B.A. WAIVERS 1932. Permissible overhang of panel walls.
A panel wall constructed as described in clauses 17, 18, & 19, or a shell of a cavity wall constructed as described in clause 20 shall in no case overhang the concrete casing of a supporting steel beam by more than ⅓ in all of the thickness of the wall or shell, as the case may be & in every instance where the overhang beyond the top flange of the supporting steel exceeds one third of the thickness of the wall or shell plus 2", the concrete girder casing shall be reinforced in combination with an adjoining floor slab in such a way as to transfer the load axially to the beam.

A cavity wall the base courses of which are built solid for the full width of the wall and to to a height above its base of not less than its thickness, may overhang to the same extant as a solid panel wall.

DIAGRAMS OF PERMISSIBLE OVERHANG OF PANEL WALLS : L.C.C. WAIVERS 1932.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1

INFORMATION SHEETS

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L. C. C. WAIVERS: IV

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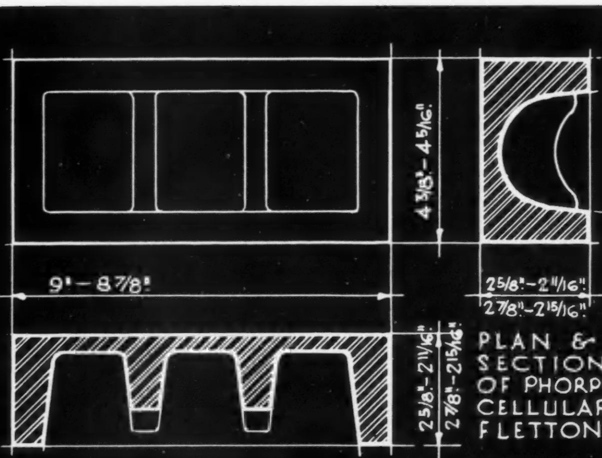
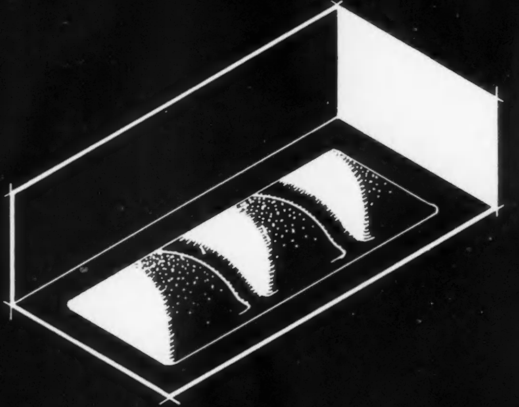
THIS week we publish the last of the four Information Sheets devoted to the requirements of the L.C.C. Waivers, 1932. The other Sheet accompanying this issue deals with Phorpres Cellular Flettons.

The following is a full list of the subjects previously issued :—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units: 1.
13. Apr. 12—Lavatory Units: 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs: 1.
23. June 29—Concrete Stairs: 2.
24. July 6—Pressed Steel Stairs: 1.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs: 2.
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes: 1.
30. Aug. 17—Lay-out of Wardrobes: 2.
31. Aug. 24—Common Sizes Miscellaneous.
32. Aug. 24—Electric Lighting: I.
33. Aug. 31—Electric Lighting: II.
34. Aug. 31—Electric Lighting: III.
35. Sept. 7—Electric Lighting: IV.
36. Sept. 7—Vacuum Cleaning Systems.
37. Sept. 14—Steelwork: I.
38. Sept. 14—Steelwork: II.
39. Sept. 21—Steelwork: III.
40. Sept. 21—L.C.C. Waivers: I.
41. Sept. 28—L.C.C. Waivers: II.
42. Sept. 28—L.C.C. Waivers: III.



PLAN & SECTIONS OF PHORPRES CELLULAR FLETTON



COMPARATIVE CHARACTERISTICS OF CELLULAR & PHORPRES FLETTONS

	CELLULAR FLETTON	PHORPRES FLETTON
STRENGTH: crushing,		
9" test wall 4'6" long & 9'0" high .. crushing load per foot run.	40 tons.	62 tons.
4½" test wall ditto	22·2 tons.	28·9 tons.
Transverse, test brick over a 7" span	13 059 lbs.	LONDON STOCK. 857 lbs

N.B. The use of bricks of very high crushing strength is generally unnecessary, as then the strength of the mortar becomes the limiting factor.

" The strength of the half brick Cellular Fletton wall is considered ample for all purposes where a half brick wall is normally used in building construction." ✦

		PHORPRES FLETTON.
WEIGHT:		
per cube ft. in cement	87 lbs.	113 lbs.
per cube ft in lime mortar	76 lbs.	102 lbs.
HEAT TRANSMISSION:		
B.T. U/s per sq. ft per hour for 1° F. difference in temp.	0·59	0·70

MOISTURE & PERMEABILITY,

" The test of Cellular Fletton brick is some approach to the actual behaviour of the brick in a wall. At approximately zero head the Cellular brick shows a slower rate of absorption than the solid brick. At 20 cms head the Cellular brick also has some advantage over the solid brick although in all tests the results were of the same order of magnitude." ✦

N.B. The points in a wall most vulnerable to water penetration are the joints. There is reason to suppose that a lime mortar joint is less permeable than a Portland Cement joint.

SOUND TRANSMISSION:

"The sound transmission test result can only be applied to the specific test conditions stated, under these however the Cellular brick is markedly superior at the frequencies employed in the tests made." ✦

PHORPRES CELLULAR FLETTON.

USES: for walls, external & internal.
for partitions.
for facing work.
where ever bricks may be used.
not suitable below ground.

SIZES: in accordance with the R.I.B.A. standards, i.e.
9"–8 7/8" × 4 3/8"–4 5/16" × 2 5/8"–2 11/16"
these build 4 courses to 12"
&
9"–8 7/8" × 4 3/8"–4 5/16" × 2 7/8"–2 15/16"
these build 4 courses to 13"

FINISHES: Plain
Keyed (for plaster).
Rustic (for facing).

WEIGHT: per cube foot,
in cement mortar .... 87 lbs.
in lime mortar .... 76 lbs.

STRENGTH: crushing load per foot run,
9" wall in cement .... 40 tons.
4½" wall in cement .... 22·2 tons.
transverse:
test brick over a 7" span .... 13,059 lbs.

BOND: suitable for all brick bonds, brick-on-edge work etc.

BUILDING REGULATIONS:

LONDON, Pending the revision of the Code of Practice, Cellular Flettons are being used in various buildings with the permission of the District Surveyor.

PROVINCES: Cellular Flettons are being used under the Model Bye-laws of the Ministry of Health.

COST: for the greater part of London
56 shillings per 1000.
for certain London areas
57/3 per 1000.
for the Provinces, according to the transport charges.

Information from the London Brick Company & Forders Ltd.

✦ The quotations given above are from the reports of the Building Research Station & the National Physical Laboratory. For fuller reports & figures see further sheets.

INFORMATION SHEET : PHORPRES CELLULAR FLETTONS.

SIR JOHN BURNET, TAIT & LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

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PHORPRES CELLULAR FLETTONS

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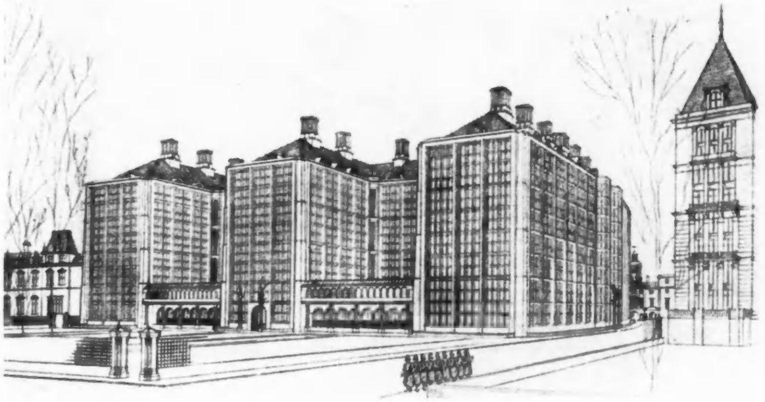
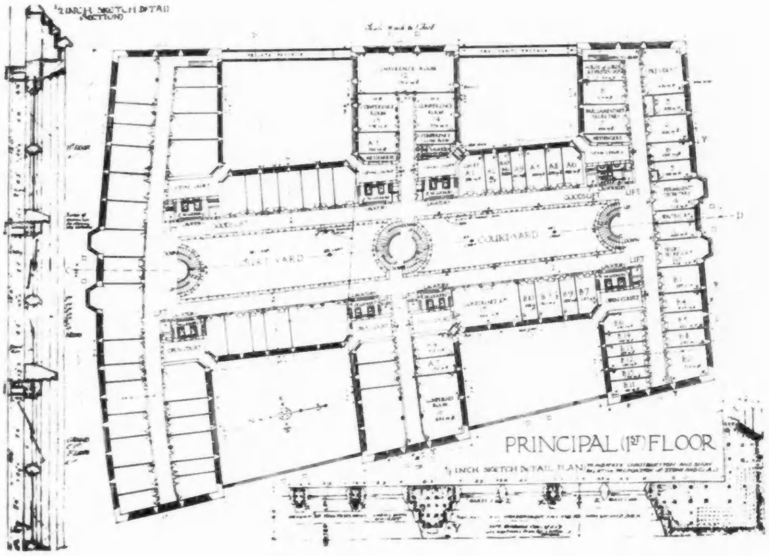
FOR a list of the Information Sheets previously issued, see the other Sheet accompanying this issue.

OFFICES IN WHITEHALL

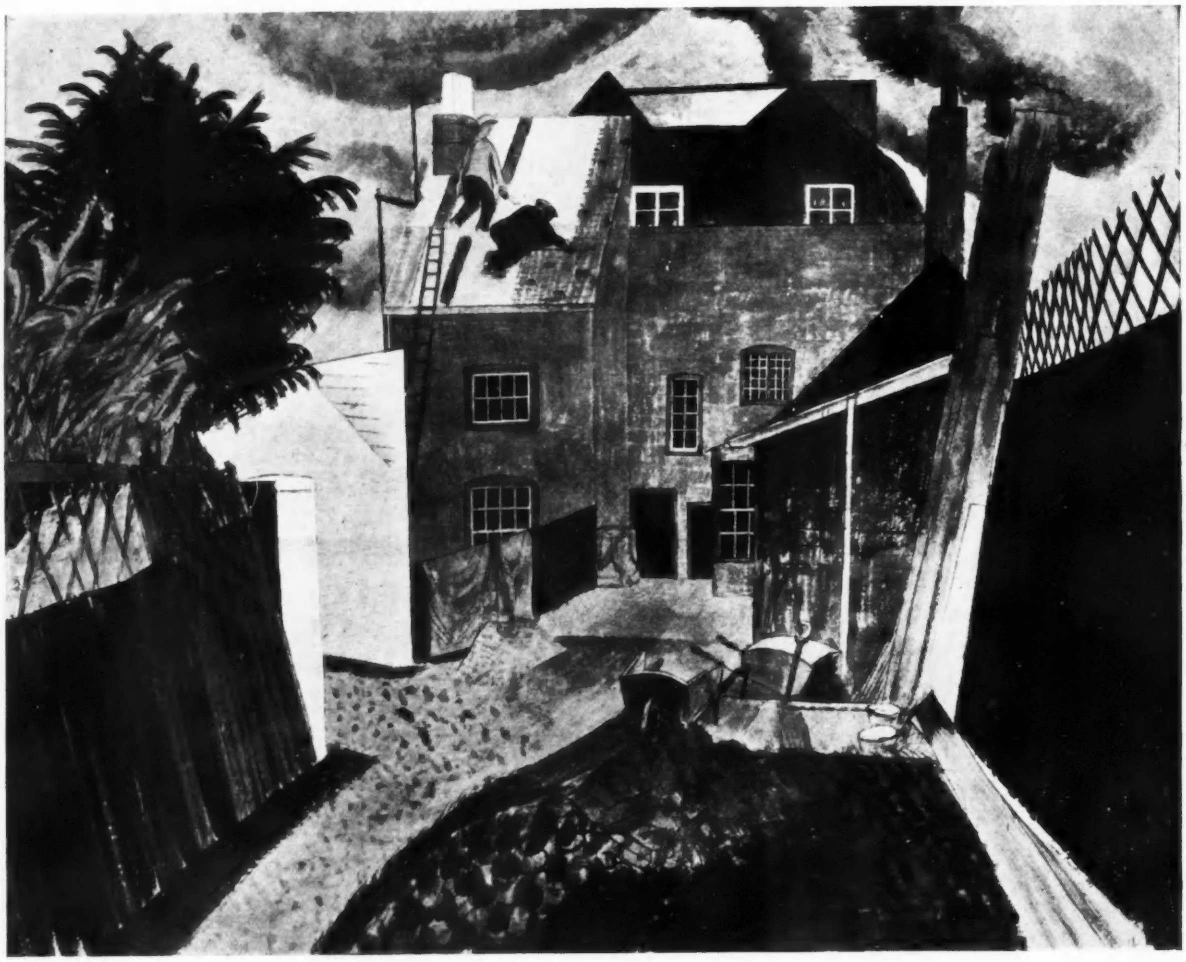
EARLY SYMPTOMS OF MODERNISM





THE straightforward quality of this design, submitted by A. Randall Wells in the 1914 competition for Government buildings in Whitehall, is remarkable when contrasted with the elaborate classicism almost universal at that time.

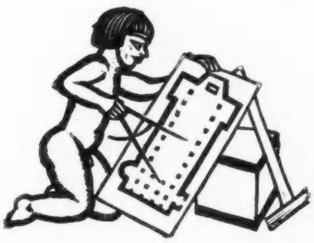
The competition has recently received renewed attention, since a new competition has been instituted for Government buildings on the same site. The author of the above scheme, however, is over the age limit that has been set.



IN RURAL ESSEX

The intensively pastoral landscape and the obscure villages of rural Essex provide the subject of a large proportion of the water-colours by Edward Bawden, now on exhibition at the Zwemmer gallery. This is a photograph of one of them; the title given to it is a quotation from Wordsworth:

"They dreamt not of a perishable home
Who thus could build."



HOW MANY ARE UNATTACHED?

THE primary aims of the new Institute of Registered Architects, as defined by the promoters, are to consolidate the position of the Registered architect, to secure the amendment of the Registration Act, to obtain work for architects by collective advertising, and to make the title Registered architect, and the value of this title, known and respected. It is to be composed wholly of Registered architects and devoted solely to their interests.

The formation of the new Institute was opposed immediately by the R.I.B.A. and by the Architects' Registration Council but, as we pointed out at the time, the main issue was not between the I.R.A. and the R.I.B.A. but between the I.R.A. and the Registration Council. With the object of finding out how far the Registration Council could carry out the objects of the I.R.A.—in other words how far the I.R.A. was superfluous—we therefore asked in our issues for August 10 and 17 respectively, the following questions of the Registration Council.

a : Does Clause *f* Section 13 of the Act enable the Registration Council to promote measures embodying the most important, if not all, of the primary objects of the new Institute?

b : Does the constitution of the Registration Council allow it to establish a code of professional practice for the guidance of the Registered Architect who is not a member of a professional society?

c : Would the Registration Council have power to remove the name of a person from the Register for failing to work to such a code of professional practice?

d : Has the Registration Council defined what an architect is, or, rather, what a Registered Architect should be? This is a question which vitally affects the final decision of the Council as to whom to accept and whom not to accept for Registration.

e : How many of the architects accepted for Registration are not members of the R.I.B.A. or of a similar body?

These questions have been vaguely answered in the official statement of the Registration Council, published in our last issue, thus :

a : From the information available to the Council it appeared to them that the *raison d'être* of the Institute of Registered Architects was the advancement of the interests of the architect as a registered person, in the main, by the promotion of an Amending Act and the establishment of a Code of Professional Conduct. In the opinion of the Council, which is representative of all architectural and allied interests, whether associated or not, those of architects as registered persons are the Council's concern, and they alone possess adequate powers for the advancement of such interests.

b : On the question of a Code of Professional Conduct this again is a responsibility of the Council and a duty of its Discipline Committee.

c : The Council alone can grant admission to the Register and the Council alone can remove from the Register. That being so it is clear that no Code of Professional Conduct formulated by any other body can be effective in determining whether an architect is to remain a registered person or not.

It will be seen that the most important question, *e*, still remains unanswered : "How many of the architects accepted for Registration are not members of the R.I.B.A. or of a similar body"? The profession cannot hope even to understand the main issues raised by the establishment of the I.R.A. until this question is answered.

The profession must also know :

Whether the unattached architects already Registered are greater in number than the attached?

How many of the unattached architects have the necessary qualifications to become members of the R.I.B.A. or other bodies.

We are informed unofficially that "the number of unattached architects who have been registered is far from being the great flood imagined. The total so far is not very great, and there is no reason to suppose that there will be a great influx between now and December 31."

If this is so it could be argued with some justice that there is no ground for the formation of the new I.R.A. If it is not so—if there are in fact thousands of unattached Registered architects who have no hope of entering the "recognized" societies—a case might conceivably be made out for the formation of the new Institute, even in face of the Registration Council's statements quoted above. For if what the Registration Council implies is true, and if it is responsible not only for the conduct but for the advancement of the interests of the Registered architects, then it appears as though the question subtly raised by Major Athoe on page 446 of this issue is not merely an academic one. If the Registration Council exercises its full powers as interpreted by its recent statements, what becomes of the R.I.B.A. as the recognized head of the architectural world? Why, for instance, should governments consult the President of the R.I.B.A. on architectural matters rather than the Chairman of the Registration Council?

Instead of bringing about unity Registration seems to have brought about the reverse. Since it is unthinkable that those who put Registration into force cannot have foreseen the pitfalls that would appear, the least they can do, in our opinion, is to provide some sort of explanation of the present very unsatisfactory position.

The Architects' Journal
9 Queen Anne's Gate
Westminster, S.W.1
Telephone: Victoria
6 9 3 6
Telegrams:
Buildable
Parl.
London

NOTES & TOPICS

CORRUGATED IRON

I AM bound to confess that I had never quite found a justifiable niche for corrugated iron until, a few days ago, I saw it actually being made ; but I discovered then that there is nothing inherently bad about the stuff at all.

*

There is, in everyone's mind, a very strong prejudice against the material, and, in a sense, with some excuse. But, so far as I can see, it all arises from the fact that it was first used for (and has since been associated with) ramshackle and claptrap buildings, on which no thought of decency or æsthetics was wasted.

*

No one ever seems to have considered that it might, properly used, have an architectural value.

*

To the sceptics, accordingly, it will be a surprise to learn that there are about seven different types of corrugation—all standard, and obtainable without fuss—and that of these the only one which is ever seen in England is far and away the least attractive.

*

Even the variations of size on the ordinary section are, some of them, quite pleasing ; and some of the other forms are really delightful—notably one which has flat surfaces between single corrugations, and would lend itself to a judicious use as shuttering for concrete, apart from many direct uses such as roofing and partitioning.

*

Far be it from me to say who is to blame for the ignorance of the architectural possibilities of this Cinderella of materials : probably it is the manufacturers. But let no designer sneer again until he has looked into the matter for himself.

THIRTY NEW CHURCHES FOR SCOTLAND

An attempt is being made to raise £180,000 to build thirty new churches in Scotland. All the economic considerations have been mentioned. The effect upon unemployment has been regarded with warm approval, and not one word has been said about the design or the architectural character of those churches.

*

Problem : Would religious convictions prevent a speculative builder from jerry-building a church?

THE NEW PLEASURE

" Inside, the rooms varied in style from early Tudor as interpreted by pre-war Tottenham Court Road, to the Shoreditch-Assyrian style which followed the Paris Exhition of Decorative Art in 1925. The house had never got as far as chromium-plated modernism.

*

" It was a house that was splendidly equipped for the giving of parties at which high-pressure heartiness could be maintained. There was always a cocktail round the corner. If words could cause impressions upon plaster, serrations corresponding to the words ' Old Boy ' would have covered every ceiling."

*

This was the abode of Upton Narquall, advertisement director of *The Echo*, as described in *The New Pleasure*, by John Gloag, just published by George Allen and Unwin. There is much for the student of architectural taste to enjoy in the book ; though I see the publishers describe it as " the story of a biological invention that changes the whole nature of sexual selection."

*

The results of the invention to civilization were incredible. A new world dawned. What that world was you must read for yourself. It is a more probable and a more pleasing world than Mr. Huxley's brave new one.

*

The New Pleasure is not only an entertainment ; it is an education. It should be a best seller. I believe it will be.

FENCHURCH STREET STATION

Mr. C. J. Brown, engineer for the Southern Area of the London and North Eastern Railway, is to be responsible for the extensive reconstruction of that dreariest of London termini, Fenchurch Street. Mr. Brown has an opportunity for doing some civilizing work, but it would be easier if he could start after an earthquake. Complete re-building and re-designing are the only cures for the grimy and congested savagery of nearly every London terminus.

EDWARD BAWDEN

Edward Bawden's work as a water-colour painter has been, until his extremely successful current exhibition, surprisingly little before the public. The exhibition, two paintings from which, I understand, are reproduced in this issue, is in fact his first "one-man" show.

*

Hitherto he has been chiefly known as an illustrator, not only of books, but of pamphlets and advertising folders, and as a distinctively personal designer of wall- and pattern-papers and (a province in which inventiveness and relevance are particularly hard to combine) of typographical borders.

*

Also for his share of the Morley College wall-paintings. Now, I understand, his decorative ability is to be demonstrated in still another medium; for he is at work on the costumes and settings for the Old Vic. production of *The Tempest*, which is to be presented some time in December.

"CHOCOLATE BOX" ART

Messrs. Cadbury Brothers recently invited a number of members of the Royal Academy, and some other artists of ability and reputation, to design for them some chocolate boxes. The exhibition of the results at the Leicester Galleries was both amusing and illuminating.

*

I have nothing but praise for the promoters, who acted on the recommendations of the Gorell Report, and honestly strove to further the "Art in Industry" movement. They went for "Art" to the Royal Academy (who shall blame them? where else *should* they go?) and they got it.

*

The term "chocolate box art" must have crept even unto the portals of Burlington House—indeed it obviously has. And it seems that the folk inside have missed the whole point of it. They must have thought, presumably, that the "chocolate box" was something "period"—that has been "grown out of.'

*

They didn't realize that the term sums up, in two words, a sort of mawkish futility which was largely brought about by lack of appropriateness in design, and that without a change of outlook "chocolate boxage" will go on for ever.

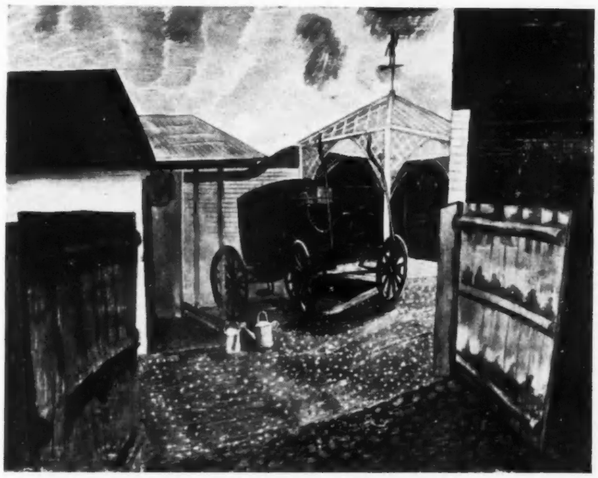
*

And so we find that amongst the gnomes of Arthur Rackham and the fruit of Mark Gertler and the circus of Laura Knight one appropriate—(that is non-"chocolate-box," as we have come to think of the term, but expressive of *Chocolates*, which is rather different)—one apt design shines out; and that, for shame! by a non-academician, Paul Nash.

*

I am sorry for Messrs. Cadbury, whose confidence must have been shaken a little, for there have been many comments.

*



A water-colour painting by Edward Bawden, from the exhibition of his work now in progress at the Zwemmer Gallery. Another is reproduced as this week's frontispiece.

Far be it from me to take sides, or to weigh the merits of those who are Academicians and those who are not. But with the industrial design exhibition of 1935 in the minds of many people it is disturbing to find the R.A. failing at first hand, on a subject which it has taken up before the public gaze.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, October 12

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS. At the University, Sheffield. "Tendencies in Modern Kinema Planning and Design." By J. R. Leathart, F.R.I.B.A. 5.30 p.m.

HOUSING EXHIBITION. At the Kelvin Hall, Glasgow. Until October 28.

ROYAL ACADEMY, Burlington House, Piccadilly, W.1. "Early Methods of Oil Painting." By Professor A. P. Laurie. 4 p.m.

MORLEY COLLEGE, Westminster Bridge Road, S.E.1. "Provision of New Houses." By Sir Ernest Simon. 8 p.m.

Saturday, October 14

Sunrise 6.22 a.m. Sunset 5.10 p.m.

R.I.B.A., 9 Conduit Street, W.1. Exhibition of designs of students exempted from the R.I.B.A. Final Examination. Until October 21. 10 a.m. to 8 p.m. (Saturdays, 10 a.m. to 5 p.m.) 10 a.m.

ST. PAUL'S ECCLESIOLOGICAL SOCIETY. Visit to St. Silas-the-Martyr, Prince of Wales Road, Kentish Town, and All Hallows, Savernake Road, Gospel Oak. Meet at St. Silas-the-Martyr. 2. 30 p.m.

ARCHITECTURAL ASSOCIATION, 34, Bedford Square, W.C.1. First of a series of five non-technical lectures on the Housing Problem. "Slums in the City and the Country." By E. Maxwell Fry, A.R.I.B.A. 3 p.m.

LONDON SOCIETY. Visit to the Courtauld Institute of Art, 20 Portman Square, W.1. 2.30 p.m.

Tuesday, October 17

LONDON SOCIETY. Visit to the new Library and Muniment Room, Westminster Abbey, S.W.1. Also Wednesday, October 18. 3.30 p.m.

Wednesday, October 18

ST. PAUL'S ECCLESIOLOGICAL SOCIETY. At the R.I.B.A., 9, Conduit Street, W.1. "The Stone Sculptures and Wood Carvings in Worcester Cathedral." By P. M. Johnson, F.R.I.B.A. 8 p.m.

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. Third of twenty-four lectures on the History of Architecture. By Sir Banister Fletcher, PP.R.I.B.A. 6.30 p.m.

NEWS

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POINTS FROM THIS ISSUE

There is nothing inherently bad about corrugated iron 438

A dispute between neighbours over a fence dividing their land. . . . The plaintiff's case was that the defendant had broken down the fence and carried it away 446

A large number of architects are still under the impression that they are automatically registered by the fact of membership of the R.I.B.A. or of the Allied Societies 450

Before long an honest nationalism should again be possible in architecture 455

An English pre-fabricated house.... 461

●

BUILDING EXHIBITION

The next Building Exhibition organized by the Building Trades Exhibition Ltd., London, will be held at Olympia from September 12 to 26, 1934.

H.M. the King has again graciously consented to become Patron of the Exhibition.

The President of the R.I.B.A., Sir Giles Gilbert Scott, R.A., has accepted the Presidency for the ensuing year.

SLUM

Sir Hilton Young (Minister of Health), was one of the chief speakers at the Conservative Associations' Conference, held at Birmingham last week. Sir Hilton congratulated the local authorities on their response to the Government's slum clearance appeal. He said it was a result worthy of our authorities.

"I see in it the promise of successful achievement. I have received returns already that cover three-fifths of the population.

"When I decided on the campaign, I decided that we must set before us as our goal the clearance in five years of some 200,000 houses, and the consequent rehousing of some millions of our fellow citizens.

RELAPSE

The number of unemployed in the building and construction industry in Great Britain showed an increase of 10,600 during September. The increase of 6,400 on the building side of the industry occurs in spite of the continuance of good weather and in spite of the fact that conservative estimates put the number of working class houses urgently and immediately required at 750,000. It is, however, possible that the increase, like that recorded in July, is largely due to increased unemployment among painters.

The increase of 4,200 in public works reflects the stagnation that has characterized this side of the industry throughout the year. As the "News Chronicle" states: "It is impossible to resist the conclusion, studying these figures, that it is the dead hand of a lethargic and unimaginative Administration which is delaying over a vast field the improvement that is almost everywhere else beginning to show itself."

The outlook for the winter is by no means reassuring, and is definitely grave on the public works side. A repetition of last winter's experiences is quite possible as far as public works are concerned, while building activity depends largely on the weather.

The Special Committee for Public Relations of the Building Industries National Council has been successful in maximizing the decline of unemployment. Help it to minimize the increase. Subscriptions towards the funds of the Committee should be made payable to the Hon. Treasurer, and should be addressed to 5 Duke Street, Adelphi, W.C.2.

"I am glad to say that the estimate based on the returns already received shows that the goal should be attained and passed.

"The estimated totals from these returns received provide for the clearance of 210,000 houses, and the rehousing of about 1,050,000 people in five years. That is a very big effort.

"The cost will represent a total capital outlay in five years of £95,000,000 or £19,000,000 a year."

VISIT OF SIR RAYMOND UNWIN TO THE U.S.A.

Sir Raymond Unwin, PP.R.I.B.A. is to depart for the United States of America, on October 13, for the purpose of giving a series of lectures on town planning and kindred subjects. Sir Raymond Unwin will, as President of the Building Industries National Council, enquire into the effect of the recent efforts made in America to stimulate economic recovery by, amongst other things, the agency of large schemes of public works. He will endeavour to obtain such first-hand evidence as may be available of the effect of the legislative measures and the works undertaken under those measures, on the professions, trades, and personnel of the building industry, and the extent to which any increased prosperity in that industry is reflected elsewhere. He will also see its effect in the matter of housing, and housing amenities generally, and enquire to what extent it has been found advisable to develop the principle of satellite towns.

INDUSTRIAL ART EXHIBITION

A selection of the exhibits from the Exhibition of British Industrial Art, held at Dorland Hall, London, during June and July, is now on view at the Central Art Gallery, Manchester. The exhibition was formally opened by Lord Gorell on Monday last.

REHOUSING THE WORKERS

Mr. H. R. Selley, M.P., chairman of the Housing Committee of the London County Council, left for Paris yesterday on an official inspection of the latest ten-storey flats erected in the French capital.

PROTECTING THE COUNTRY FROM UNSIGHTLY BUILDING

The Elevation and Siting of Building is the title of a report, just issued by the C.P.R.E., on the "best means, legislative or administrative, of protecting the country from unsightly building by a sound control of both siting and elevations."

The report has been made by a joint committee, which sat under the chairmanship of Sir Leslie Scott, representing the R.I.B.A., the C.P.R.E., the Institute of Builders and the Institution of Municipal and County Engineers. It has been signed by all four bodies, except the last, whose members dissent.

The report expresses the view that so much can be achieved under the Town and Country Planning Act of 1932 that resort to further legislation is at present unnecessary. It recognizes that under the Act the initiative rests with the local authorities and further that the control which is regarded as essential must be exercised by them. But it also recognizes that in so far as siting and elevations affect amenity, there are architectural questions upon which architectural guidance is of great importance.

The conclusions and recommendations of the Committee are as follow:

i: That the protection of the amenities of the country, both urban and rural, in respect of building development *can* be ensured *if*—and only if—the powers of the Town and Country Planning Act, 1932, *are thoroughly and promptly exercised* by the Planning Authorities constituted under the Act.

ii. That those powers should be exercised in accordance with the following recommendations: That all planning authorities should be urged (a) to extend as rapidly and widely as possible the control over building development which may now be obtained under the Town and Country Planning Act, 1932, by means of approved planning resolutions followed by schemes, and (b) to make suitable provision to the satisfaction of the Minister of Health, either individually or through a Joint Committee or by delegation to the County Council, for the efficient performance of their function of supervising the siting, design and external appearance of all buildings.

That all authorities exercising control over siting, design and external appearance of buildings should arrange to receive architectural advice.

iii: That the Panel System affords a satisfactory method for obtaining such advice.

iv: That the right of appeal, in relation to the control of design and external appearance, should lie to a Tribunal specially constituted for the purpose under the scheme rather than to a Court of Summary Jurisdiction.

SIR EDWIN LUTYENS

Although a non-catholic, Sir Edwin Lutyens, R.A., architect for the new Metropolitan Cathedral for Liverpool, is taking part in the Holy Year pilgrimage which left Liverpool last week under the leadership of Archbishop Downey.

EXHIBITIONS

An exhibition of modern Indian paintings was opened by Sir Samuel Hoare, Secretary of State for India, at the Fine Art Society's Galleries, 148, New Bond Street, W., on October 4.

Sir Samuel Hoare said that he regarded the exhibition as the beginning of a new chapter in the artistic relations between England and India. He hoped that it would prove the first of a series. He confessed with reluctance that there was great ignorance in London of Indian art, and particularly of the more modern developments of that art.

An exhibition of paintings, prints and drawings and carved and decorated woodwork is now being held at the Alpine Club Gallery, Mill Street, Conduit Street, W. The exhibition, which includes work by some fourteen artists, will remain open until October 21.

MODERN FACTORY DESIGN

Professor Maier Leibnitz, of the Technical High School in Stuttgart, delivered a lecture on "Modern Factory Design" to a representative gathering of engineers, at the headquarters of the British Steelwork Association on Thursday last.

Professor Leibnitz was able to meet members of the Steel Structures Research Committee which was set up by the Department of Scientific and Industrial Research in co-operation with the British Steelwork Association, and he dealt with the direction of recent German research work in factory and steel-frame building construction.

A student's study-bedroom unit on the fourth floor of the Pavillion Suisse, Paris, by Le Corbusier and Jeanneret. Three similar standard units are grouped around a series of garden terraces, open to the air, at the top and on the south side. The building, which has recently been completed, is illustrated and described on pages 451-453

This research, he said, had brought to light many interesting advances, notably in the plastic theory of design, which had led to a more rational utilization of the elastic properties of steel construction. This was illustrated by tests carried out on continuous girders, which showed that the stress transfer due to plastic qualities of steel had not hitherto been definitely evaluated.

Professor Leibnitz illustrated his lecture with several examples of steel factory design and also dealt with the conditions which are essential to secure the best lighting conditions.

MODERNIZING A LONDON STATION

Details of a plan for modernizing Fenchurch Street Railway Station, situated in the city, were announced last week. The scheme includes strengthening and renewal of bridges; reconstruction of platforms; and the provision of a new subway to give access to the new platforms.

Fenchurch Street is the second oldest railway station in London, London Bridge being the oldest.

WATERLOO BRIDGE

Last week the L.C.C. issued the following statement in connection with the reconditioning of Waterloo Bridge:—

"Tenders for the reconditioning of Waterloo Bridge will be invited by public advertisement in due course. In the meantime the following general particulars of the extent of reconditioning are given to enable firms who contemplate tendering to consider a method of executing the work:—

"Piers Nos. 2, 3, 4 and 7 (numbering from north abutment) are to be underpinned.

"Arches Nos. 5, 6 and 7, and piers Nos. 5 and 6 are to be taken down and rebuilt.

"The foundations of every pier except No. 1 (incorporated in the Victoria Embankment wall) and No. 8 on the Lambeth foreshore, are to be given an effective bearing area of not less than 3,000 square feet at a level of not less than 35 feet below Ordnance datum.

"The carriage-way is to be widened by corbelling."

It is expected that the bridge will be closed towards the end of April for a period of four years.

NEW POLICE BUILDINGS IN LONDON

The Court of Common Council is to be asked to sanction the erection of a new police station at Bishopsgate and the rebuilding of the city police hospital. The work is estimated to cost £120,000.

SIR JOHN SOANE'S MUSEUM

Sir John Soane's Museum, 13 Lincoln's Inn Fields, W.C.2, will be open (free to the public) on Thursdays and Fridays during October and November between 10.30 a.m. and 5 p.m. (in October) and 10.30 a.m. and 4 p.m. (in November).

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS

The following lectures have been arranged by the Sheffield, South Yorkshire and District Society of Architects and Surveyors for the ensuing session:

October 12.—"Tendencies in Modern Kinema Planning and Design," by J. R. Leathart, F.R.I.B.A. November 9.—"The Displacement of the Architect and Craftsman by the Engineer and the Industrial Worker," by H. B. Creswell, F.R.I.B.A. December 14.—"Office Buildings," by L. Sylvester Sullivan, F.R.I.B.A. 1934: January 11.—"The Design of Aerodromes," by John Dower, M.A., A.R.I.B.A. February 8. —"Colour in Decoration," by Basil

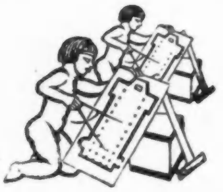
Ionides, L.R.I.B.A. April 12.—Annual General Meeting.

The lectures, to be held at Sheffield University, will commence at 5.30 p.m.

ST. ANDREW'S CHURCH

On October 14 Lord Aldenham is to lay the foundation-stone of St. Andrew's Church, which is to be erected at Kingsbury, N.W., after having been transferred, stone by stone, from Wells Street, W.

COMPETITION NEWS



GIDEA PARK HOUSES COMPETITION

The assessors in the above competition have selected ten designs in each class, and the authors of each of the first five have been asked to submit tenders by October 30.

Should any competitor's tender in any class fail to comply with the conditions, the next design or designs in order of merit in the respective class will be selected by the assessors, and the author or authors will in turn be given an opportunity of submitting a tender.

As soon as five tenders in each class have been approved the result of the competition will be made known.

The assessors report there were 475 designs submitted, the majority of which were of modern type houses with flat roofs. The standard throughout was high.

The assessors' full report on the competition will be issued when all five tenders in each class have been approved.

MENTAL COLONY AT STOKE-ON-TRENT

The Stoke-on-Trent Corporation has decided to obtain competitive designs for the proposed mental colony at Stallington Hall.

INSTITUTION OF STRUCTURAL ENGINEERS

The Institution of Structural Engineers has awarded the Portland House Travelling Scholarship (value £150) and the Gold Medal to Mr. W. A. S. Cormack, A.R.I.B.A. of the Department of Building, College of Technology, Manchester.

The Silver Medal has been awarded to Mr. K. Ray, B.SC.(ENG.), of Romney House, Marsham Street, London, S.W.1

The Andrews Prize, which consists of technical books or instruments, is awarded to the candidate who obtains the highest aggregate marks in the Associate-Membership Examination. As a result of the July Examination, the winner is Mr. W. Tomlinson, of Northwich, Cheshire.

COMPETITION BARRED

The Competitions Committee of the R.I.B.A. call the attention of members to the fact that the conditions of the competition for proposed Winter Gardens and Bathing Pool at Ventnor are not in accordance with the Regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime members should not take part in the competition.

Competitions Open

December 4.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor: Thomas S. Tait, F.R.I.B.A. Premiums: £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1. The conditions were reviewed in our issue for September 28.

December 15.—Sending-in Day. Messrs. Jenson and Nicholson invite designs for the decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Proposed Extensions to the Town Hall, Swindon. Assessor: Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere A.R.I.B.A.

Proposed Town Hall and Municipal Buildings, Stoke Newington. Assessor: Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

R. I. B. A.

FINAL EXAMINATIONS

A list of R.I.B.A. problems in design for the year ending December 31, 1934, is printed on pages 460-461 of this issue.

EXHIBITIONS

The designs of students of schools of architecture recognized for exemption from the R.I.B.A. Final Examination will be exhibited in the R.I.B.A. Galleries, 9 Conduit Street, W.1, from October 14 to 21 inclusive, between the hours of 10 a.m. and 8 p.m. (Saturdays 10 a.m. and 5 p.m.)

The R.I.B.A. Silver Medal for Recognized Schools and £5 in books is awarded for the best set of drawings submitted.

The designs of students of schools of architecture recognized for exemption from the R.I.B.A. Intermediate Examination will be exhibited in the R.I.B.A. Galleries from October 26 to November 4, inclusive, between the hours of 10 a.m. and 8 p.m. (Saturdays 10 a.m. and 5 p.m.)

The R.I.B.A. Bronze Medal for Recognized Schools and £5 in books is awarded for the best set of drawings submitted at this exhibition.

OBITUARY

HEATON COMYN

We regret to record the death, in his fifty-seventh year, of Mr. Heaton Comyn, F.R.I.B.A., M.I.STRUCT. E., M.R.S.I.

The son of Colonel F. F. Comyn, of the Bombay Staff Corps, he was educated at Dulwich College, later being articled to Messrs. John Begg and R. S. Balfour, FF.R.I.B.A. from 1895 to 1900. In 1900 he won the A.A. travelling studentship and, in 1902, the architectural studentship of the British School at Athens. Two years later he won the Tite Prize of the R.I.B.A.

In 1911 Mr. Comyn was appointed Surveyor to the Worshipful Company of Drapers, and in the same year also began his private practice.

He was responsible for the design of numerous public and private buildings. These included interior decorations to the People's Palace, Mile End Road, E.; new house, riding school etc., at Camilla Lacey, Dorking; almshouses at Pirton, near Hitchin; the Penrose memorial library, Athens; and (in conjunction with Mr. Leslie Moore, F.R.I.B.A.), business premises in the city and alterations to Howell's School, Denbigh, North Wales. In 1932 he was awarded the third prize in the Scarborough Hospital Competition, won by Mr. Wallace Marchment.

He was elected a Fellow of the R.I.B.A., in 1919, and served on the Art Standing Committee of the Institute from 1924 to 1927. He was Surveyor to the People's Palace, the Conservative Club, the East London College, All Hallows Church, Lombard Street, and the Exchange Telegraph Company.

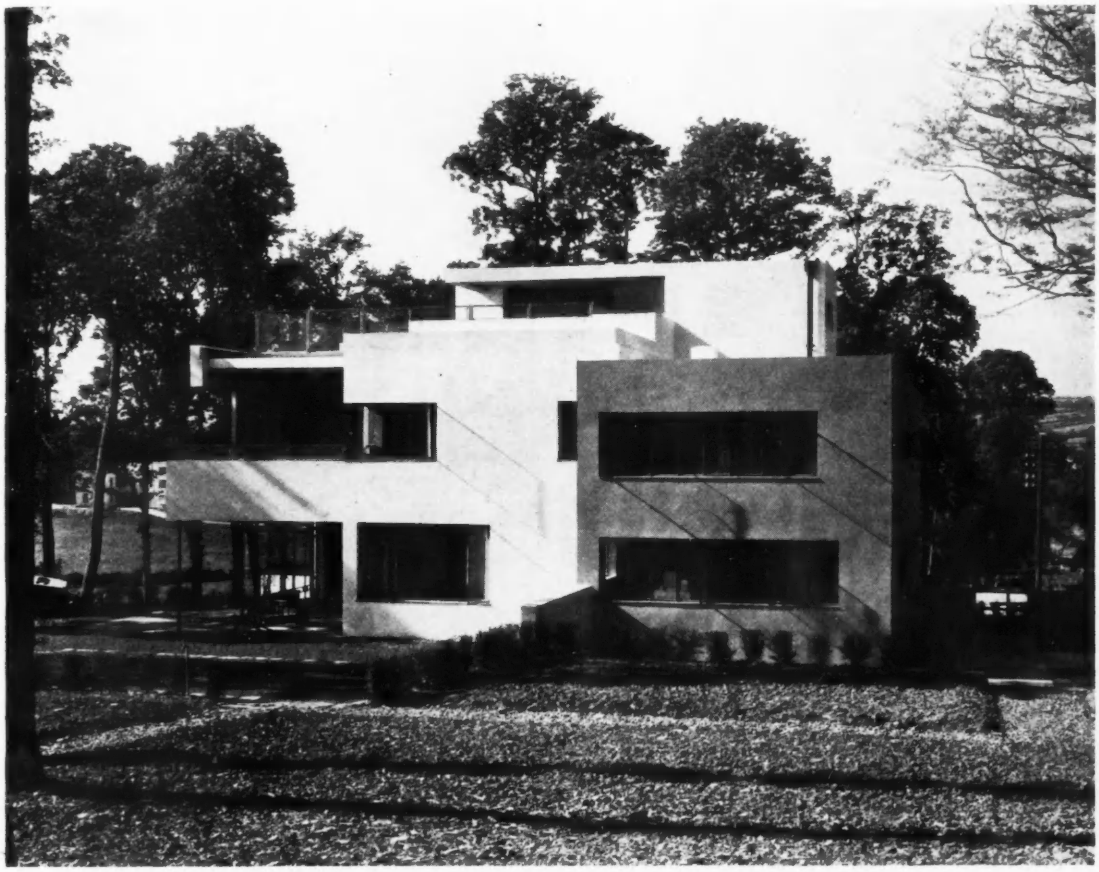
During the war he served with the Artists' Rifles and the Royal Garrison Artillery.

T. H. N. PARR

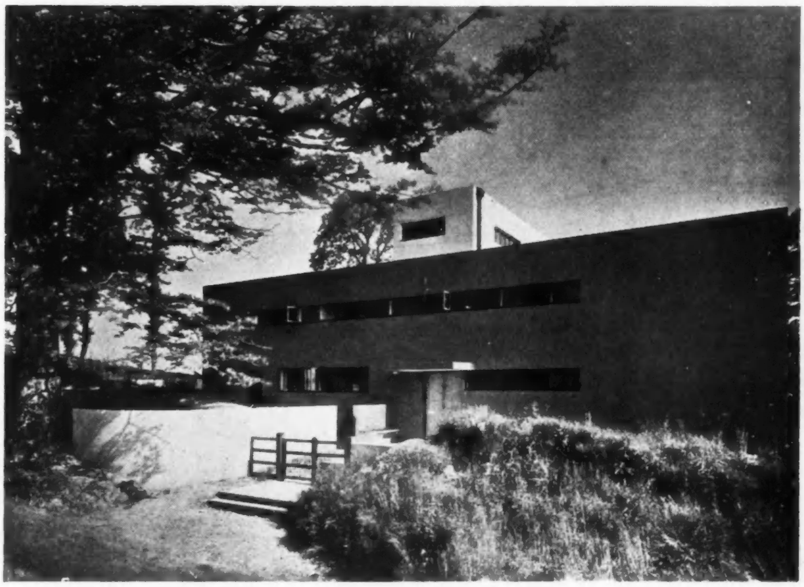
We regret to record the death of Mr. Thomas H. N. Parr, F.R.I.B.A., which took place on September 23, at his residence at Kingston-on-Thames. He was a well-known Middlesex architect and surveyor.

Mr. Parr was articled to a firm of architects at Birmingham and later became deputy borough surveyor and architect to Walsall Borough Council. Subsequently he was appointed engineer and surveyor to Brentford District Council, a position he occupied for 13 years until 1907. He then retired from public service and practised as an architect and surveyor on his own account.

HOUSE AT TOTNES, SOUTH DEVON



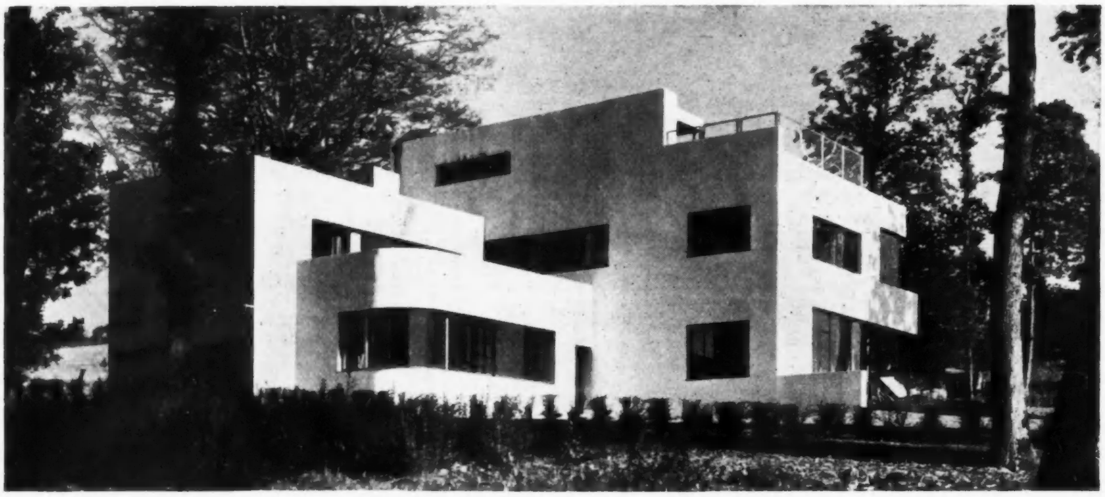
This house is for the occupation of the headmaster of Dartington Hall, Devon. It is situated on a country road that runs north and south and is planned with its main rooms open to the view on the south and west. The flat roof is also used as a terrace, partly open to the sun and partly sheltered.



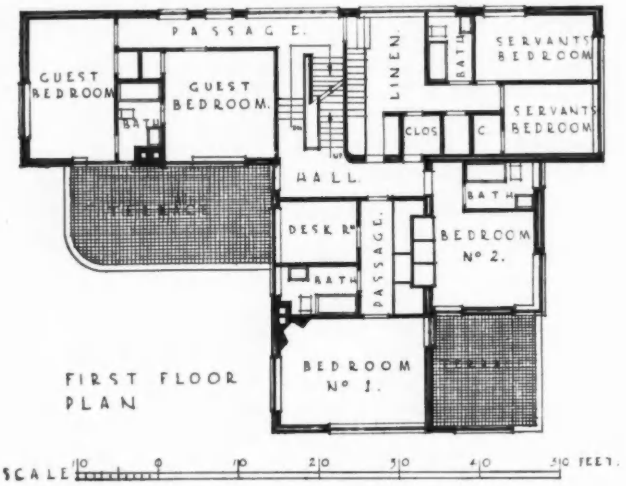
The two photographs are of the house from the south and the house from the road, showing the service side facing east.

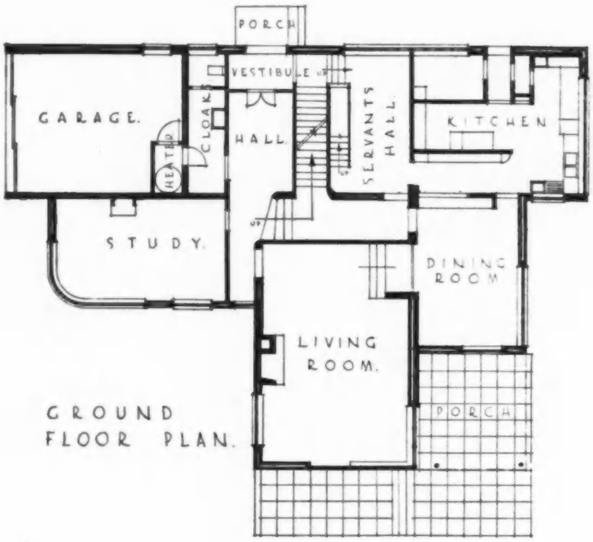
DESIGNED BY HOWE AND LESCAZE

HOUSE AT TOTNES, SOUTH DEVON:



From the north-west.


PASSAGE.
GUEST BEDROOM
GUEST BEDROOM.
BATH
LINEN.
BATH
SERVANTS BEDROOM
SERVANTS BEDROOM
CLOS
C
HALL.
TERRACE
DESK Rm
PASSAGE.
BEDROOM No 2.
BATH
BATH
BEDROOM No 1.
TERRACE
FIRST FLOOR PLAN
SCALE 10 0 10 20 30 40 50 FEET.


PORCH
VESTIBULE
GARAGE.
CLOAKS
HEATER
HALL.
SERVANTS HALL.
KITCHEN
STUDY.
DINING ROOM
LIVING ROOM.
PORCH
GROUND FLOOR PLAN.

Following are some notes on the methods of construction and materials and finishes employed :

WALL CONSTRUCTION

Footings and first floor slabs are of reinforced concrete. All exterior walls above the first floor level are of two 4½ in. brick walls 3 ins. apart, bonded together with galvanized iron ties.

ROOFING

On top of roof slabs, 2 in. cork insulation has been placed. On top of the cork, where concrete slabs occur, enough cinder concrete has been laid to give the proper rise and fall for the water to drain. On top of this is the built-up roofing. For the terrace roofs, 6 in. by 6 in. quarry tiles have been laid with a cover base flush with brick. The other roofs have a slag finish and the roofing runs up the wall about 10 ins. All chimneys where they meet the roofs are flashed and counter-flashed with copper. The coping on the parapet is formed with 2 in. concrete slabs sloping to the inside of the wall, with expansion joints every 3 feet.

WINDOWS

Metal windows are used throughout. 20 in. metal windows are stock and swing out ; 2 ft. 6 ins. doors swing in and are hung on pivots.

FLOORS

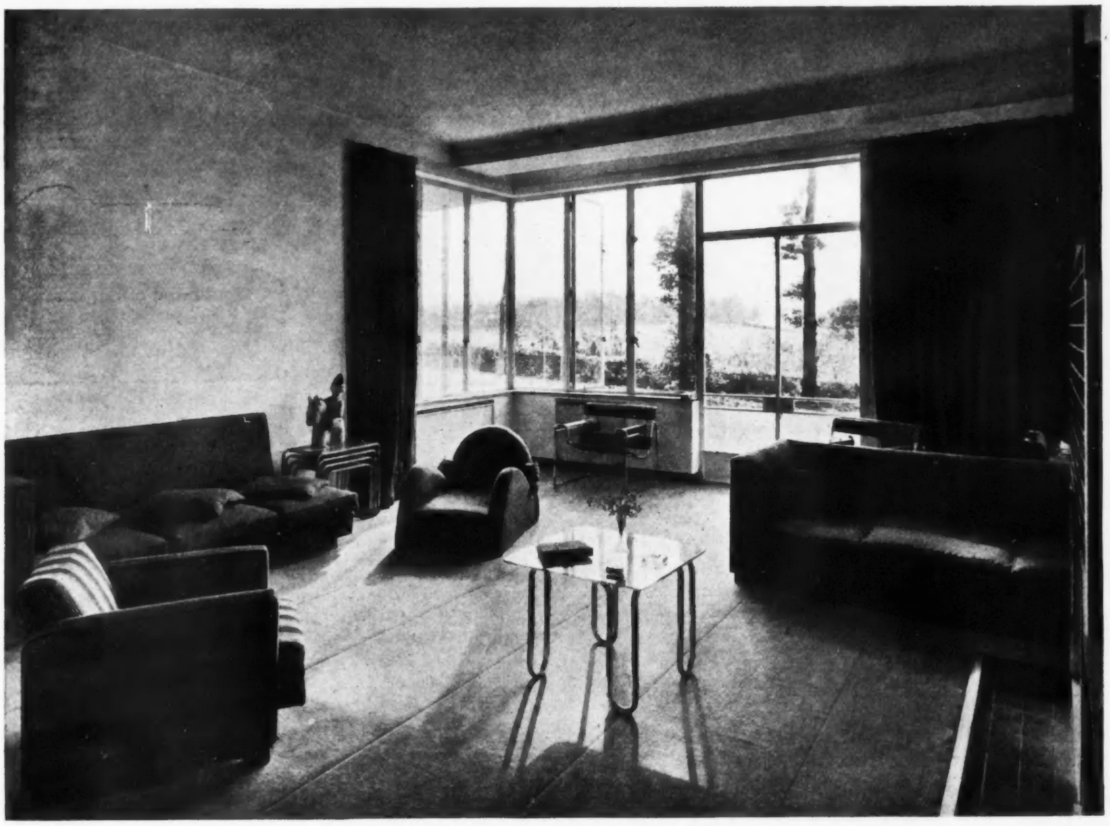
Floors on the entire first floor are concrete. The terrace over the study, and the roof terrace over the second floor are framed with concrete beam and slab construction. The terrace from the main bedroom is an exposed concrete slab finished with cement.

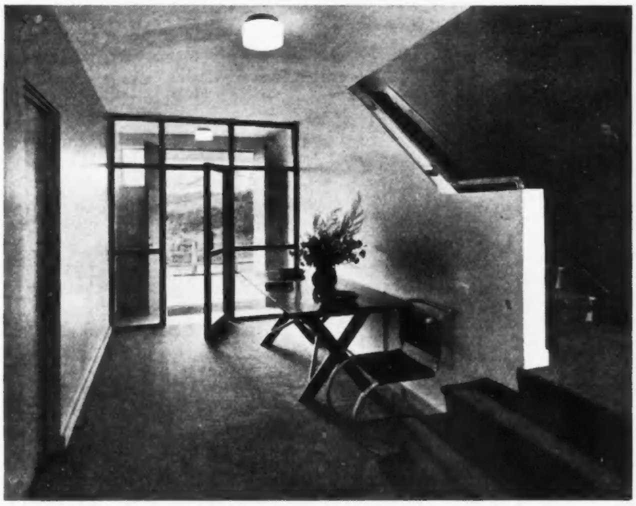
GENERAL

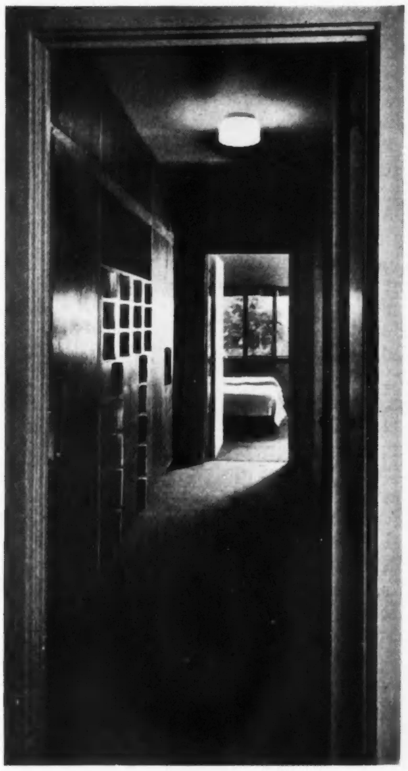
All interior partitions are plaster on block partition to standard size. Exterior frames and interior door frames are metal, no trim being necessary.

The heating system is of steam with panel radiators under windows, and heated by an oil burner.

DESIGNED BY HOWE AND LESCAZE







Three interior photographs. Top: the living room, the side windows of which look on to the open porch; bottom: left, the staircase hall and entrance vestibule; right, an upstairs passage with built-in cupboards along the wall.

LETTERS FROM READERS

G. B. J. ATHOE,
(Secretary of the Incorporated Association of Architects and Surveyors)

ERNEST PRESTWICH, F.R.I.B.A.

G. MAXWELL AYLWIN, F.R.I.B.A.

Government Offices in Whitehall

Sir,—With regard to the new Whitehall scheme and the stipulation that the choice of an architect shall be limited to one under 55 years of age, I would remind the First Commissioner of Works that he was a member of the House which passed the Architects' (Registration) Act in 1931. The Act and its objects received the blessing of more than one Cabinet Minister, and it was said in Parliament that the future test of an architect's qualifications would be determined by whether he was a registered architect or not.

The Act is now in operation, but there is no age limit save that an applicant for registration must be 21 years of age.

We are told (and I agree) that it is the duty of every *bona fide* architect to register.

Again, we are told—in this case I do not agree—that, in the opinion of the Architects' Registration Council, "there is no necessity for an architect, paying a registration fee of 6s. 8d. per annum to the Architects' Registration Council, to pay a further fee of one guinea or two guineas per annum to another body to secure or advance his interests as a Registered Person."

I suggest, therefore, that if the government must go to an architectural body to help it find an architect, it should go to a body which it itself has set up. I am sorry the Architects' Registration Council has apparently made no attempt to "secure or advance" the registered architects' interests by suggesting that the Minister should make use of its services.

Personally, I think the Government should institute an open competition.

In regard to the age limit of 55 years, I cannot accept the reason for limiting the age. Genius cannot be limited in terms of years. This age limit rules out our most distinguished architects, and the "limited list" will undoubtedly eliminate the Knotts and Scotts of this generation. In effect, therefore, there will be an age limit at both ends and an extremely limited choice of architectural talent. An open competition would give the old and middle-aged a chance, the young a hope, and the nation the best design.

G. B. J. ATHOE

Sir,—I note on page 408 of last week's issue in your reference to the ten selected finalists in the Competition for the Board of Trade Offices, held in 1914, I am included amongst the "over 55." As a matter of fact I am not yet 45.

ERNEST PRESTWICH

The Institute of Registered Architects

Sir,—This body was unfortunately sprung upon the public during the summer recess when it was obviously impossible to gather representative meetings of either the Registration Council or the R.I.B.A. Council. It thus happens that the promoters of the new Institute have their case well prepared while the differing bodies are still formulating their arguments against what they consider a redundant project. The outside observer, such as myself, bears this in mind in weighing the merits of the situation.

Sir Edwin Lutyens's questions are many and various. While the replies are being formulated I am sure he would be glad to reply to a similar set of questions on his own model, which would help the rank and file to understand.

(1) Can the new Institute compel all registered architects to belong to it?

(2) Are there any possible members he would not exclude from membership who would be ineligible to belong to existing societies?

(3) Will the new Institute be able to prevent "anybody who chooses to do so from describing himself as an 'architect'?"

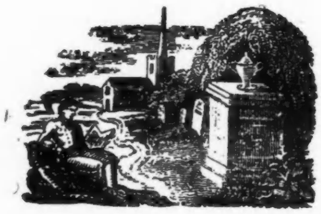
(4) Is there any reason why the Registration Council cannot promote an amendment of the Registration Act?

(5) Will the new Institute be empowered to prosecute for a flagrant infringement of the Act?

(6) Can the new Institute assist the Registration Council to override their legal obligations to register all *bona fide* architects applying before the end of the year?

From replies to these questions the rank and file would be able to make their own judgments as to whether or not the new Institute is redundant, without awaiting replies from the other bodies.

G. MAXWELL AYLWIN



LAW REPORT

BOUNDARY DISPUTE

Selby v. Bunn—King's Bench Division. Before Mr. Justice Du Parcq.

THIS action arose out of a dispute between neighbours over a fence dividing their land.

The plaintiff, Mr. G. Selby, owned land at Milton Road, Hendon, and he complained that the defendant, Mr. D. Bunn, had exercised acts of ownership over his (plaintiff's) land.

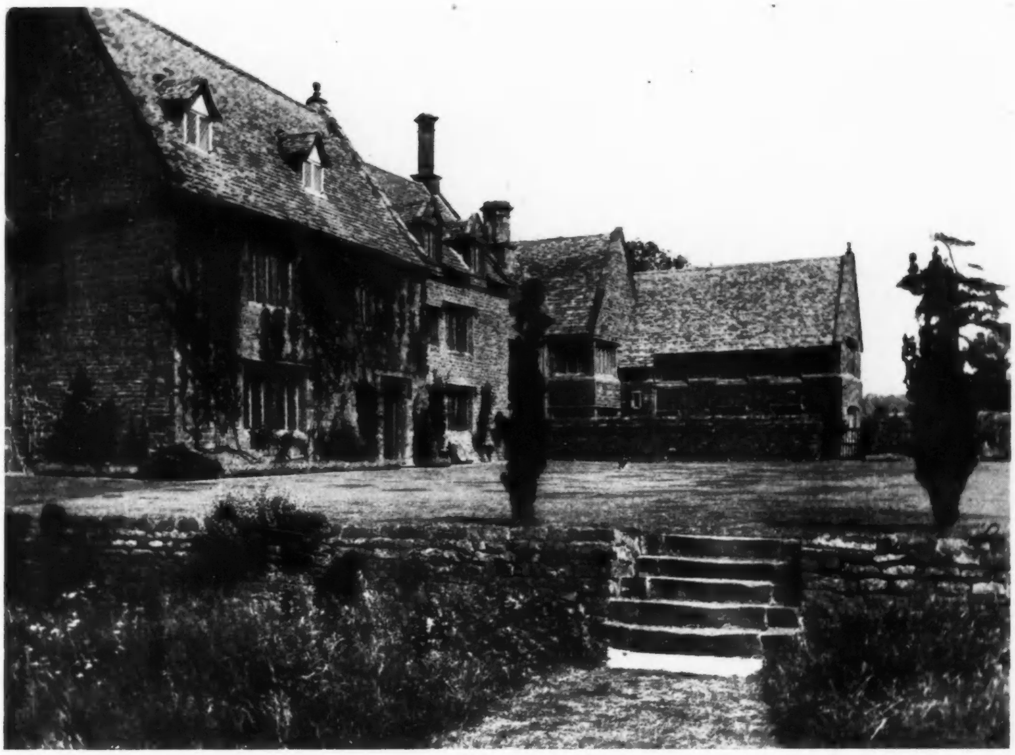
Plaintiff is the freeholder of 54 Milton Road, and the defendant was the holder of a long lease of the next-door property, No. 52. Plaintiff's case was that the fence between the properties was his freehold, and that it had been in his possession and that of his predecessors, since 1883. His case was that the defendant had broken down the fence and carried it away. He therefore sought damages for alleged trespass and an injunction restraining the defendant from exercising any acts of ownership over plaintiff's land.

Defendant denied that he had been guilty of any trespass and pleaded that the fence was affixed to his land. Defendant further alleged that certain greenhouses and the fence were wrongfully erected on his land and that he therefore removed them. He set up a counter-claim seeking an order that the plaintiff should remove the greenhouses, and asked for an injunction restraining the plaintiff from trespassing on his land.

Plaintiff by his reply denied the acts alleged by the defendant.

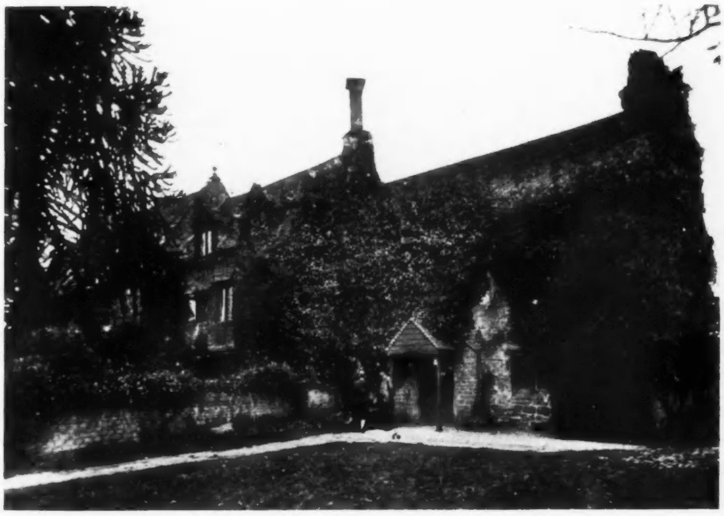
His lordship, after hearing a considerable body of evidence and arguments on the conveyances of the property, in giving judgment, said the dispute was an unfortunate one between neighbours. To his mind the conveyances were not very satisfactory, but he was satisfied that at some time about 1883 the fence was in the position indicated by the plaintiff's evidence. Therefore plaintiff must succeed and he held that he was entitled to the strip of land in dispute. The plaintiff would have £7 damages and the injunction he sought. The counter-claim of the defendant he dismissed and plaintiff would have the costs of the action and of the counter-claim.

TYSOE MANOR, WARWICKSHIRE



The re-modelled house from the south west.

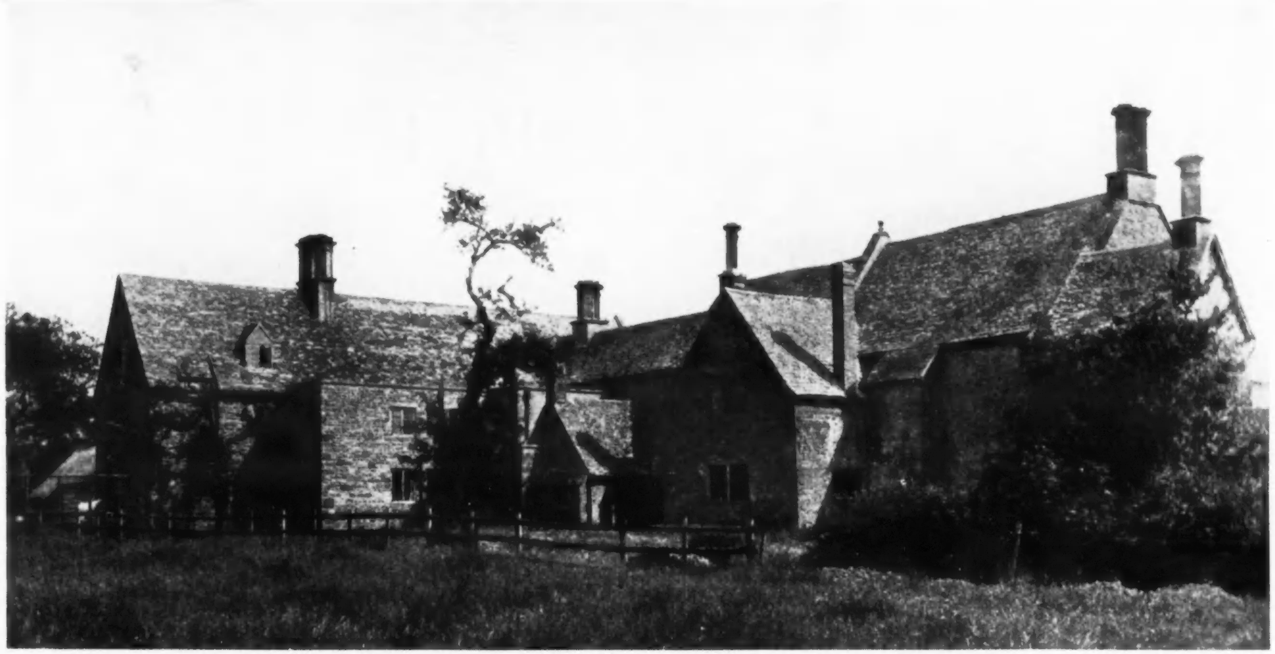
Tysoe Manor stands at the foot of the Edge Hills on the borders of Warwickshire and Oxfordshire, at the end of the village of Upper Tysoe, close to which lies Lord Northampton's famous house, Compton Wynyates. It is also close to the Hornton ironstone quarries that provide the rich brown stone from which the North Oxfordshire villages in the seventeenth and eighteenth centuries were largely built.



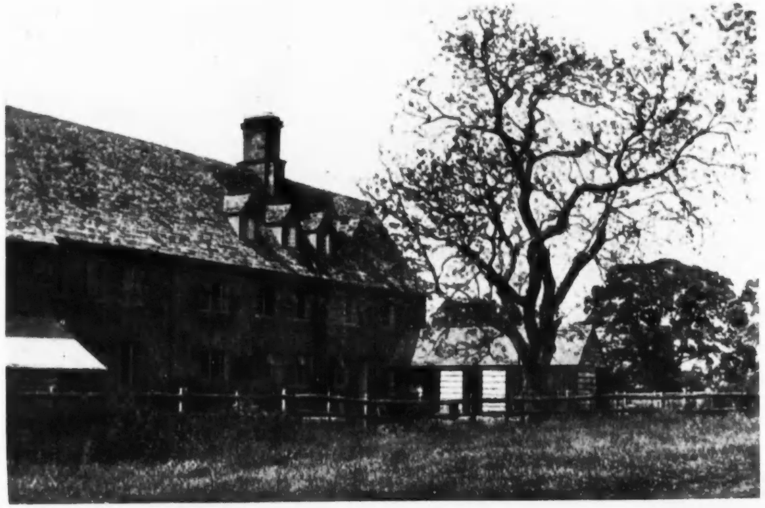
The house as it was before alteration.

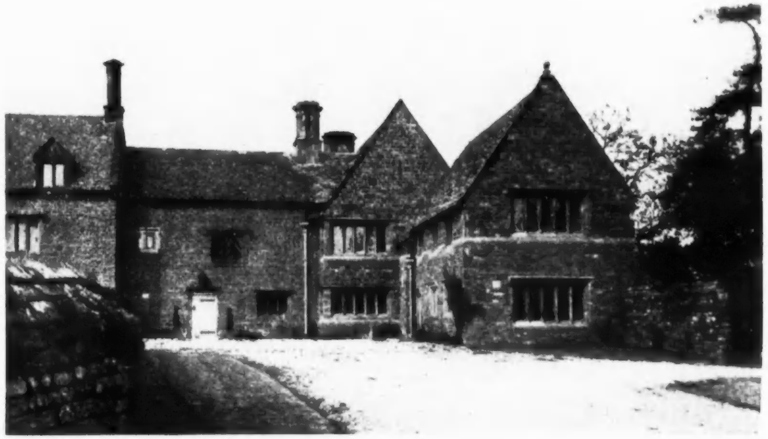
RE-MODELLED BY ARMSTRONG AND GARDNER

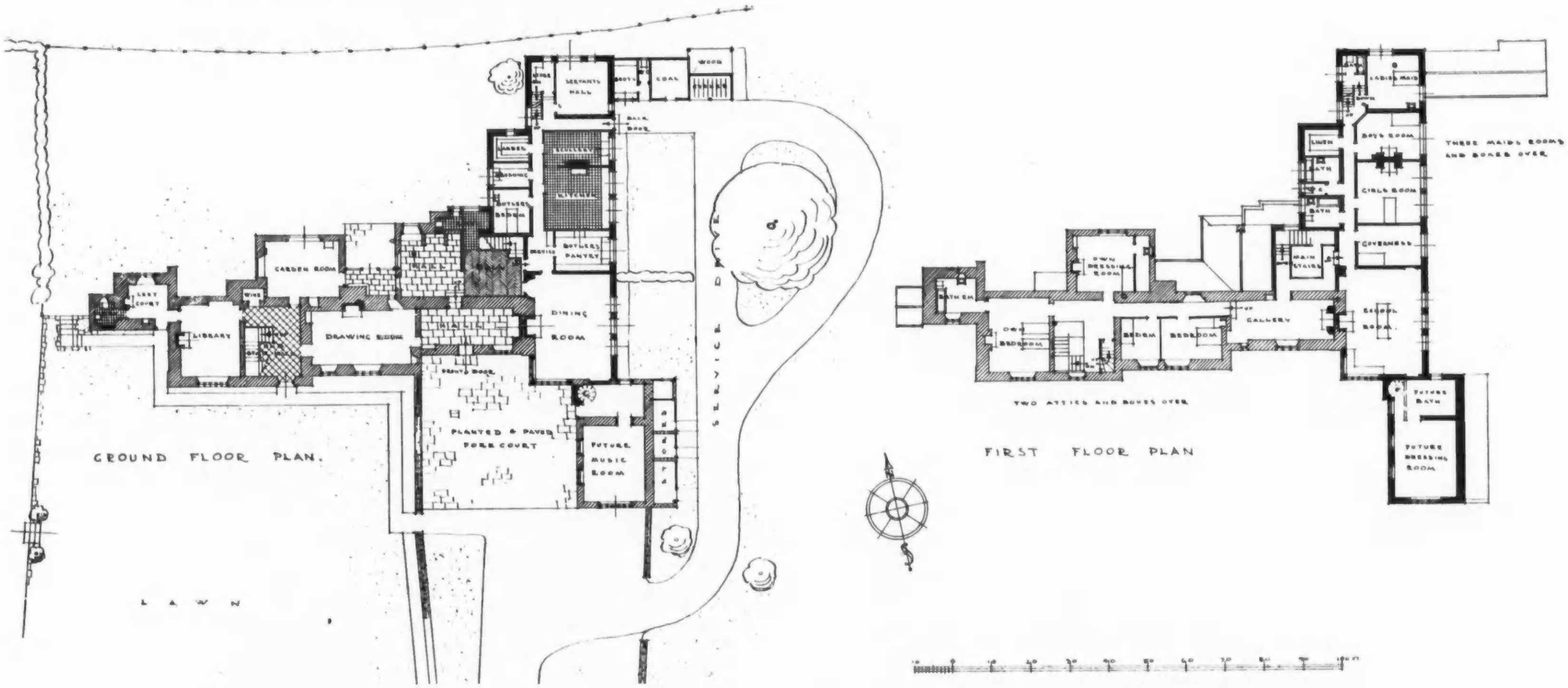
TYSOE MANOR, WARWICKSHIRE



Three photographs of the re-modelled building.






GROUND FLOOR PLAN.
SERVANTS HALL
STORE
BOOTS
COAL
WOOD
BACK DOOR
LARDER
SCULLERY
KITCHEN
BUTLERS ROOM
BUTLERS PANTRY
SERVICE
GARDEN ROOM
HALL
WINE
LAST COURT
LIBRARY
STAIR HALL
DRAWING ROOM
HALL
DINING ROOM
FRONT DOOR
PLANTED & PAVED FORE COURT
FUTURE MUSIC ROOM
SERVICE DRIVE
LAWN
FIRST FLOOR PLAN
LADIES MAID
BATH
LINEN
BOYS ROOM
THREE MAIDS ROOMS AND BOXES OVER
GIRLS ROOM
GOVERNESS
MAIN STAIRS
SCHOOL ROOM
GALLERY
BEDRM
BEDROOM
OWN DRESSING ROOM
OWN BEDROOM
BATH RM
TWO ATTICS AND BOXES OVER
FUTURE BATH
FUTURE DRESSING ROOM

Plans of the house as now completed. The black portion shows the new additions.

The manor house was originally part of the Compton property, and (though its history is obscure) the earliest house appears to have been of the fourteenth-century Hall type. Parts of this house remain in the present Library and old Stair Hall. The house was greatly extended during the seventeenth century, still in stone and with stone slates. It has now been re-modelled and large extensions added, chiefly of the nature of service accommodation, in the form of a new wing added to the east end of the house.

Old stone walling, slates, etc., were collected for use in the new work and form the material of the 16 in. external walls of the new wing. The old stable, formerly detached from the house, has been linked up and altered to form a music room with dressing room and bathroom over; and several old stone mullioned windows have been rebuilt into it. The new chimney stacks are of Hornton stone with moulded caps, and there is a new staircase and gallery in English oak on the site of the old dairy. Metal casements have been used in wide oak frames. The cost of the new work was 1s. 6d. per foot cube.

RE-MODELLED BY ARMSTRONG AND GARDNER

THE NECESSITY OF REGISTRATION

*[Since there are now barely three months left before open admission to the Register of Architects, to be formed under the Architect's Registration Act, 1931, closes, we publish this account of the dangers of procrastination by a contributor who has realized what official significance the existence of this register may have.—*ED., *A.J.]*

[By A CHARTERED AND REGISTERED ARCHITECT]

THE open admission to the Architects' Register closes on December 31. It is essential that by the time that date is reached every qualified member of the R.I.B.A. and of its Allied Societies and every other qualified architect should have sent in his application form.

On and after January 1, 1934, the character of the Register will begin to change. The only new names added to it will be those of architects who have passed a full educational test such as that required for the Associateship of the R.I.B.A., and before many years have elapsed it will not contain the name of a single person not so qualified.

Some 2,000 members of the R.I.B.A. have not yet applied for registration. About 1,000 members of the Allied Societies have not yet sent in their forms. A good many of these are not yet qualified to make application, but probably at least 500 of them are. *The task therefore, for the next two and a half months, is to get these 2,500 applications, and all other qualified applications in so as to complete the registration of the properly qualified architects of the country.*

It may be asked why so substantial a minority have not yet registered. The explanation lies partly in the well-known procrastination of the ordinary busy architect. Still more is it due to the fact that a large number are still under the impression that they are automatically registered by the fact of membership of the R.I.B.A. or the Allied Societies, and that no further action on their part is needed.

After two years of circulars, explanations, personal letters from the President of the R.I.B.A., and leading articles in the professional press, it might seem quite incredible that this misunderstanding should persist. But it is quite clear that it *does* exist, and that a large number of architects are quite convinced that they are already on the Register and that the letters and circulars they receive do not apply to them.

There are two and a half months in which to remove this misapprehension, and no effort can safely be spared.

Otherwise—after January 1, 1934—complaints will begin, for instance, to be received from members of the R.I.B.A. who find that their names are not on the Register, and the only reply possible will be that nothing can be done to help them, and that they must remain for ever excluded from the Register unless they sit for and pass the Special Examination.

There is no doubt a small minority of members of the R.I.B.A. who say that registration is not worth the trouble, and that they are quite satisfied with their status as Chartered Architects.

The trouble with these people is that they will wake up too late to the fact that the Register *is* of some value. They may find themselves in court giving expert evidence. Hostile Counsel having ascertained that their names are not on the Register will bring out the fact with every resource of innuendo and suggestion.

Cross-Examining K.C.: "Well, Mr. Brown, I see that you claim to be an expert in this matter. You are an architect?"

"Yes."

"Are you a qualified architect?"

"Yes."

"I have in my hands a copy of the Statutory Register of qualified architects, and I cannot find your name in it. How is that?"

"Oh, I am not a Registered Architect."

"Indeed: you say you are a qualified architect but you are not registered as such. Why is that?"

"I do not think it is necessary to be registered."

"I see. Parliament thought it was necessary, but you did not?"

"No. I am a member of the R.I.B.A. and I consider that is sufficient qualification.".

"I see. You say you are a member of a Society. Does membership of that society entitle you to be registered as a qualified architect?"

"Yes, well not exactly, but . . . ."

"Does it or does it not entitle you to be registered?"

"I don't think so."

"Are you not certain?"

"Yes, I think it does not entitle me to be registered, and I don't think it is worth while."

"I see. You are not entitled to it, and you don't think it is worth while—the grapes are sour in fact?"

(Laughter in court.)

"Well, Mr. Brown, we now know that you claim to be a fully qualified architect but you admit that you are not on the Statutory Register of qualified architects and that you are not entitled to registration. Is it possible for you to become entitled to registration?"

"Yes, I believe I can pass an examination and get on the register."

"I see, this is very interesting. If you were to pass an examination you *could* become a qualified architect. But you have never passed it?"

"No."

"I see. There is a test of the qualifications of a practical architect. But you have never passed it and consequently you cannot get your name on the Statutory List of qualified architects? Do you still tell this court that you are a qualified architect?"

"Certainly. I am a member of the Royal . . ."

"Yes, you told us that before. I understand that there are quite a lot of societies. I believe it is quite easy to found a Society and confer an affix on anyone who will send in a guinea. But is that the only reason you can give this court for telling it that you are a qualified architect?"

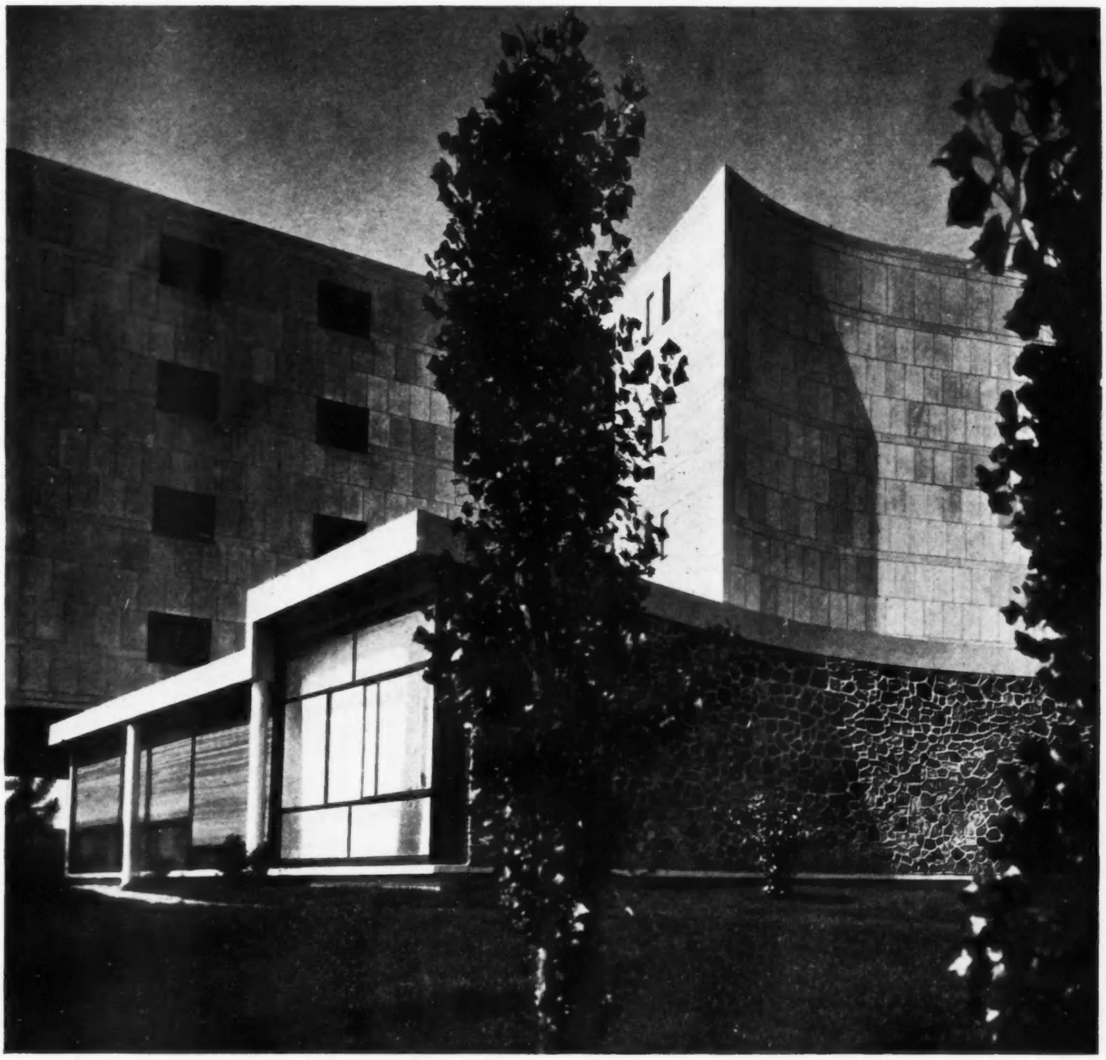
By this time the unfortunate witness is wishing that he *had* paid 6s. 8d. and sent his form in. His client is looking black at him. The solicitor is making a mental note never again to have anything to do with a witness who isn't on the Register.

Another Scene: Mr. Brown is interviewing a Board of Directors who are thinking of giving him a big office to design. One of the Directors has a friend, Mr. Robinson, to whom he hopes the job will go. He ascertains that Mr. Robinson *is* on the Register while Mr. Brown is not. He can be trusted to cross-examine Mr. Brown very forcibly to bring out the fact that he is not a statutorily qualified architect, while his own protégé is, and Mr. Robinson will get the job.

When that happens Mr. Brown will decide that after all it will be just as well to put his name on the Register, and he will write to the R.I.B.A. about it. The R.I.B.A. will have to reply that as for two solid years he disregarded a long series of appeals to register and warnings that the closing date was December 31, 1933, it cannot help him. Then he will be highly indignant, but it will be too late.

The moral is obvious. Every person who is entitled under the Act to apply for registration up to December 31, 1933, will be very short-sighted, to put it mildly, if he does not do so.

PAVILLION SUISSE, CITÉ UNIVERSITAIRE, PARIS



At the Cité Universitaire in Paris students from all over the world are housed in national "pavillions" designed, with one exception, in national styles ; the German, Greek, Cuban, Argentine and Japanese are adorned by national architectural clichés ; even Dudok's new building for Dutch students has the long vertical window and canopy-on-ball, appearing as a plagiarism of his earlier work in Holland.

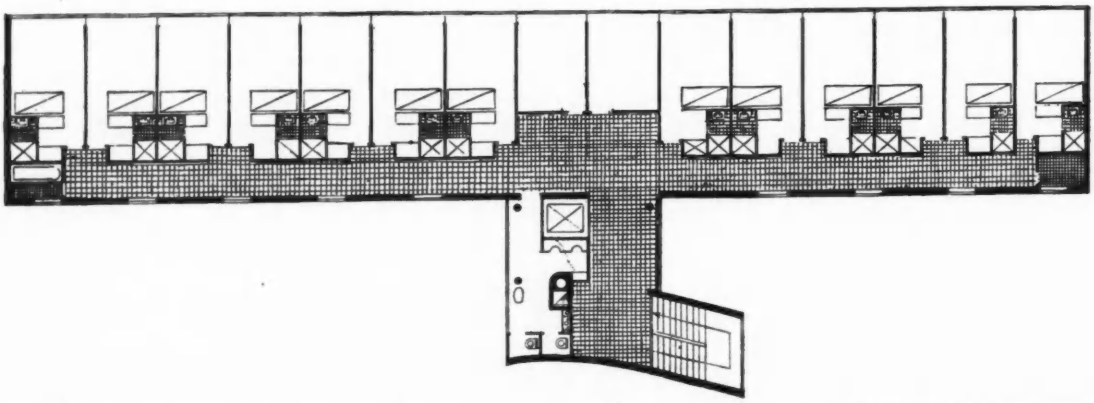
The one exception is the new "pavillion," in the Corbusier romantic-functionalist manner, in which Swiss students are housed for the first time during the present term. It is planned in two parts ; on the ground floor are large entrance hall and staircase, reading room with dining recess and caretaker's apartment.

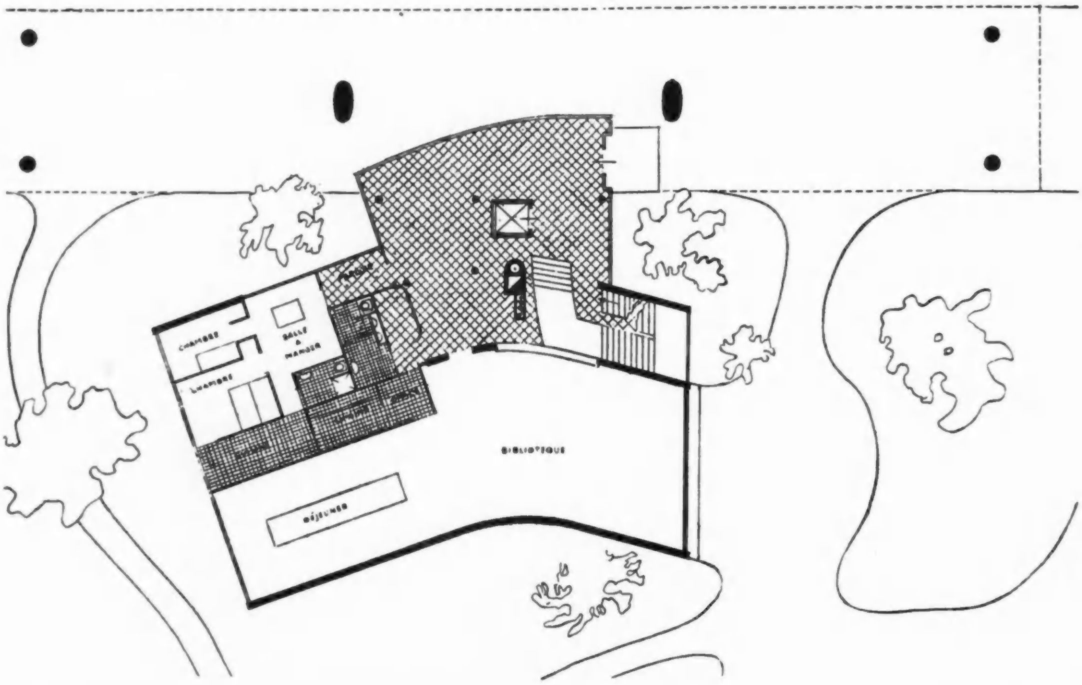
The students are accommodated in unit study-bedrooms, on the south side, in a four-storey block raised above the ground on twin reinforced concrete piers from which the floors and walls are cantilevered.

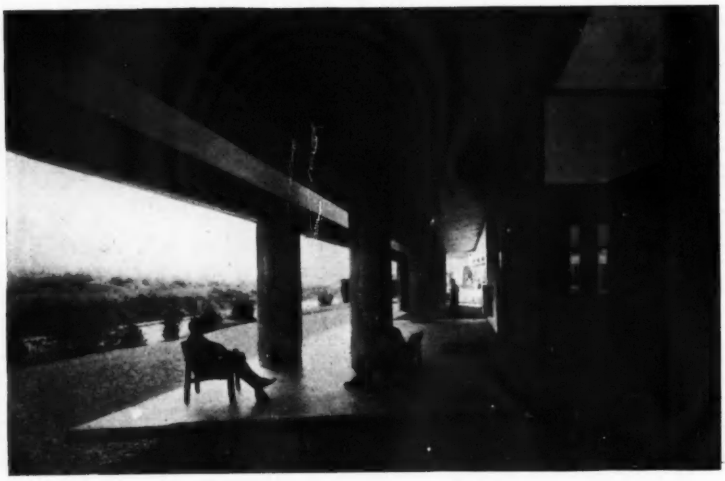
The above view is of the north-east side. In the foreground is the glazed end of the dining recess, and, beyond, the north wall of the accommodation block. This wall is pierced by windows, lighting the corridors.

BY LE CORBUSIER AND PIERRE JEANNERET

PAVILLION SUISSE, CITÉ UNIVERSITAIRE,



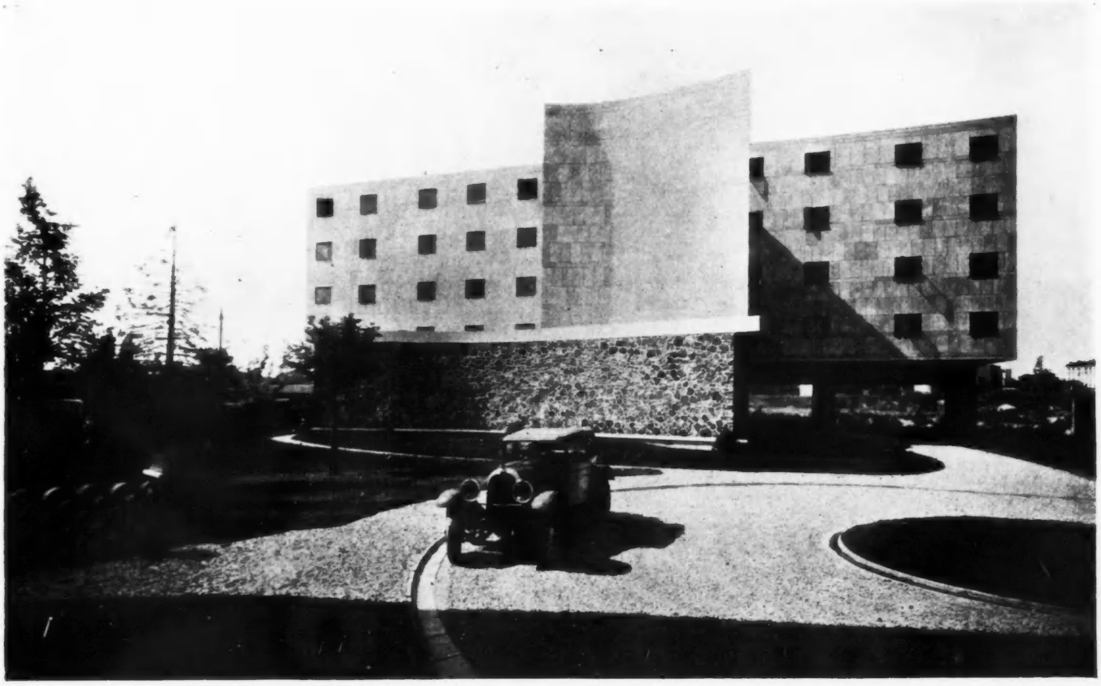




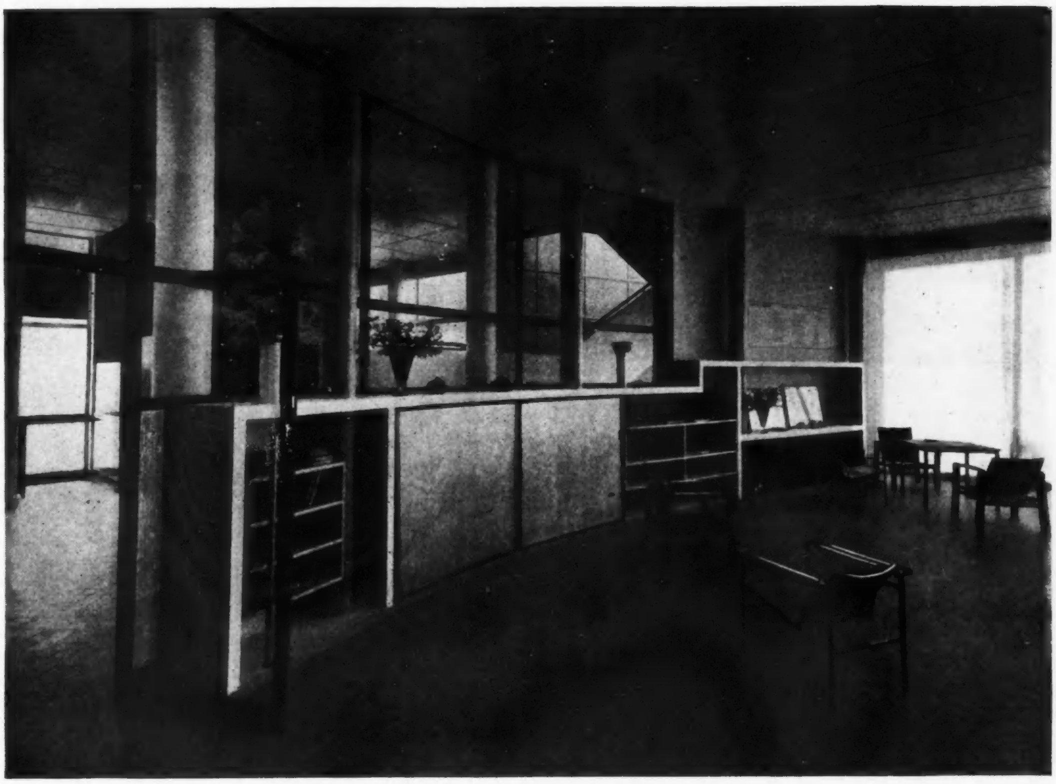
Above: Typical floor plan in the accommodation block. Each student has a study-bedroom, bathroom with shower and lavatory basin, and built-in clothes-cupboard. The standard study-bedroom unit is 9 ft. 6 ins. wide. W.c.'s and urinals are arranged in the projecting staircase tower.

Centre: Ground floor plan. The entrance hall is approached from a paved terrace under the accommodation block. Modifications were made as the work proceeded, and supporting columns arranged in pairs as shown in the photograph on the left.

PARIS : BY LE CORBUSIER AND JEANNERET

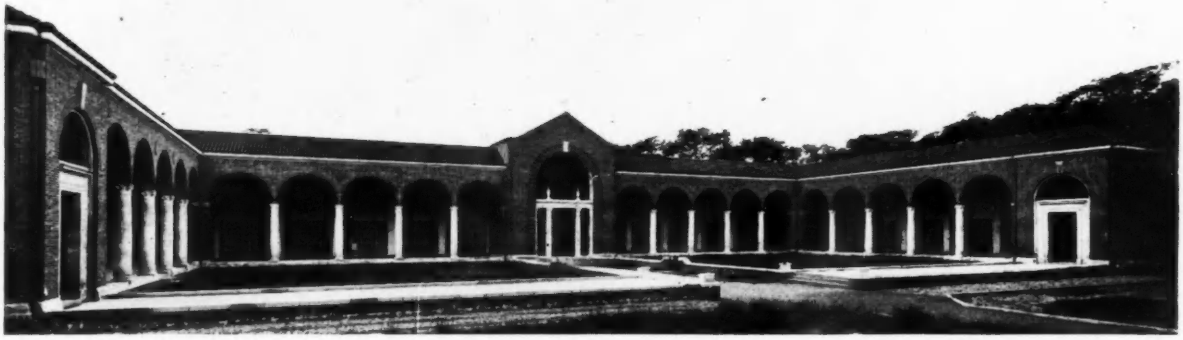


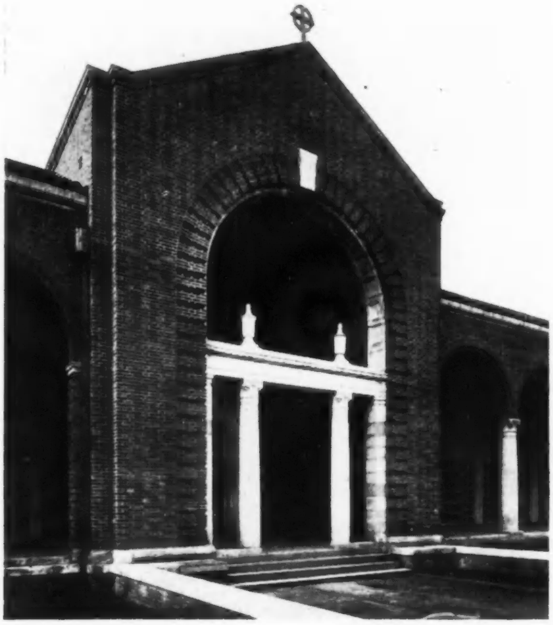
General view from the north, with curved reading-room wall in the foreground and central staircase tower behind.



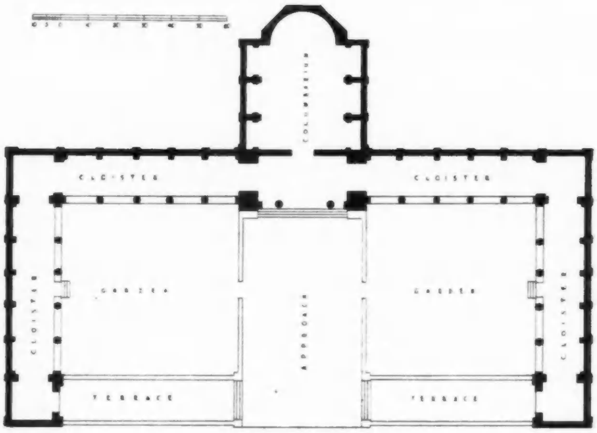
The reading-room, with entrance hall and staircase beyond the glazed partition.

COLUMBARIUM AT LEEDS





A general view of the columbarium with flanking cloisters and garden, and a detail of the central entrance feature.


COLUMBARIUM
CLOISTER
CLOISTER
CLOISTER
GARDEN
APPROACH
GARDEN
CLOISTER
TERRACE
TERRACE

LAY-OUT PLAN

This building consists of a central columbarium, with space for approximately 500 urns, and cloisters forming three sides of a square, surrounding a garden with paved terraces. In the cloisters there is space for an additional 1,500 urns, and 600 wall-tablets on the internal and external walls. The building is of multi-coloured bricks, with Portland stone trimmings. The paving is of Yorkshire flags and of marble internally.

DESIGNED BY KIRK AND TOMLINSON

Window treatment with balconies, St. Mary Abbott's Terrace, Kensington, circa 1799. An illustration from the book reviewed below; sadly chosen because, since the book was first published, this and several other delightful terraces in the same neighbourhood have been demolished to make way for flats and shops.

LITERATURE

THE REGENCY PRECEDENT

The Smaller English House of the Later Renaissance, 1660-1830. By A. E. Richardson, F.S.A., F.R.I.B.A., and H. Donaldson Eberlein, B.A. London: B. T. Batsford, Ltd. Price 15s., net.

[*By J. M. Richards*]

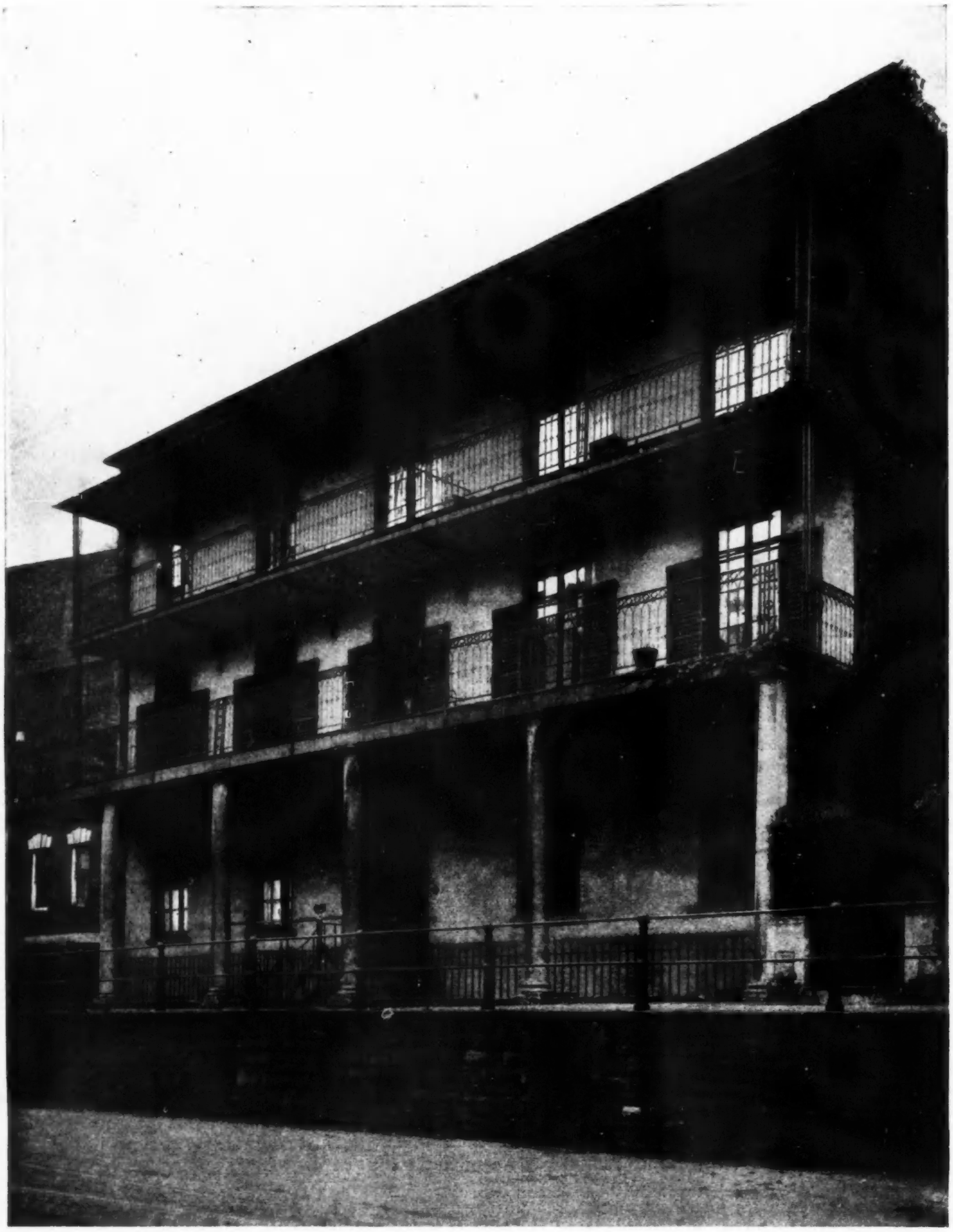
THIS is a re-issue of a book first published in 1925. Since that time it has become one of the standard works on its subject, and for that reason alone the re-issue would be welcome. It is also interesting, however, to examine it again for the sake of observing how much more obvious the applicability to our own times of the architectural expression of the period dealt with in the book has become during the eight years since it was published. It is not that the book has changed, but that our own architectural intentions (or, more exactly, our consciousness of where our always vague architectural intentions are leading us) have become clearer.

Architecturally, many things have happened since 1925, even in England; more important than any, principles that were once the peculiar notions of the prophet ahead of his time are now the definite aims, conscious or unconscious, of architects who are honoured even in their own country.

There are signs that rational architecture, which was first seen as a concerted movement in the unfamiliar shapes that grew on the Continent out of the confusion and economic stringency of the post-war period, lumpishly dehumanized (probably as a subconscious defence-mechanism against any recrudescence of nationalist sentiment), and therefore unaffected by vernacular traditions, will again take its place as an active and permanent part of every social organism. In this country various forces, both external and (as we are discovering) ephemeral influences and internal die-hardism, have delayed the general acceptance of the rational principle, and prevented the realization that such acceptance does not mean adhesion to a rigid international and ahistorical basis; but before long an honest nationalism will again be possible—one that is neither a forced revival of eclecticism nor a rejection of contemporary technology—and the delay, by making the eventual issues more simple, may even prove to have been an advantage.

As architecture takes its place again in the social picture, it seems likely that the forms in which its social functions are expressed will bear, as I have indicated, a closer and closer resemblance to those of the Regency period described in this book; not, of course, in incidental detail, but in the general appearance that a continuation of the Regency tradition of native sensibility allied with universality of aim is bound to produce. For this parallel between the eighteenth and twentieth centuries is not an accidental one.

The kind of social order in which planning takes place on a scale large enough and authoritative enough to over-ride commercial and private anti-social interests is the only one that will be possible in the future; and, as our civilization becomes more complicated, so the necessity for such planning becomes more absolute. In the past, the period during which examples of such planning were most evident is the late eighteenth century, and the architecture of that period reflects its orderliness and certainty of aim. The fact that the particular architectural merits of the eighteenth century were due to the existence of an aristocracy with a sense of civic responsibility, and in this century must come from official organization of the duties of civic control does not disturb

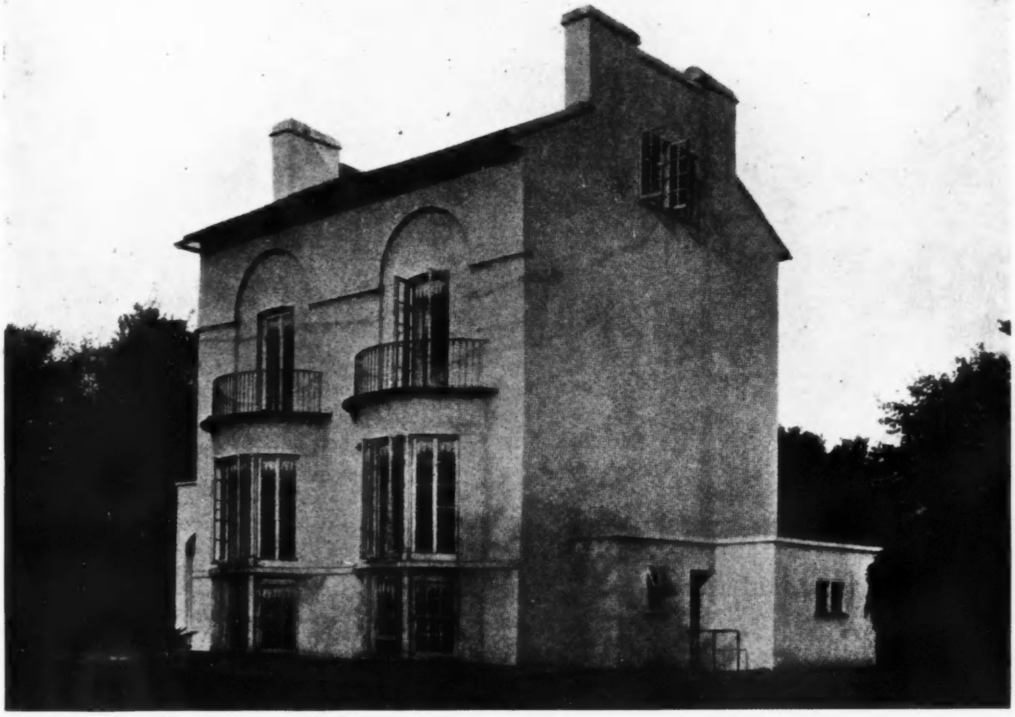


A house at Clifton, Bristol; built about 1800, but a type suitable for modern materials and lending itself to the modern need for flexibility within a standard framework. From THE SMALLER ENGLISH HOUSE OF THE LATER RENAISSANCE.

the parallel; state-consciousness in each case is the ruling factor.

The absolute certainty of sane building and adequate social forethought in all circumstances is the outstanding Regency characteristic. Individual examples are unimportant beside this quality of universality; but in the particular kind of individual example presented in this book (the smaller house) the parallel is especially striking and the universality always apparent. New materials and new conditions of speed, scale and purpose have here forced no radical changes. The old materials are in many cases still the sensible ones—the use of a new material for its own sake, however functionally, is in itself an eclecticism—and the most surprising resemblances can be found between houses illustrated in this book (one is reproduced on the opposite page) and the more rational houses of the present day.

The book deals, of course, with periods further back than the Regency, but it is the Regency achievement that is of current importance. The preliminary periods represent the gradual but triumphant assimilation into a native tradition of a strange imported idiom—as foreign to this country, functionally and topographically, as



Kent Grange, Hampstead, circa 1810. The Regency prototype of the modern English house. From THE SMALLER ENGLISH HOUSE OF THE LATER RENAISSANCE.

the idiom we are assimilating from abroad today.

I have not felt it necessary to describe this book. I have only attempted to draw a new moral from its re-issue; it is sufficiently known already as an admirable anthology and a comprehensive study of one of this country's grandest contributions to European civilization—the smaller English house of the later Renaissance.

THE TECHNIQUE OF RESTORATION

The Conservation of Artistic and Historical Monuments. Published for the International Museums Office by the League of Nations' Committee on Intellectual Co-operation as a limited edition of 500 copies. Paris. No price indicated.

APPROPRIATELY enough one of the first publications of the League of Nations' Committee on Intellectual Co-operation is devoted to reconstructive architecture—not, it need hardly be said, of the strangulated present, but of the spacious past. Equally appropriately it is a "monumental" volume, as befits the weight of the collected papers read at a Congress of government experts in the preservation of ancient buildings. This congress was organized by the International Museums Office, and held at Athens in October, 1931. Only four British representatives attended it, and only two read papers: Sir Cecil Harcourt Smith and Mr. A. R. Powys. The texts are in French, but analyses in English, German, Spanish and Italian are printed at the end. For architects the most interesting section is that which illustrates "The Technique of Conservation" with descriptions of "*la mise en valeur*" of specific examples of major importance. It is refreshing to realize that the old system of "archæology for the archæologist" has been superseded by the deliberate encouragement of the intelligent tourist, and to note the universal abandonment of what Viollet-le-Duc understood by "restoration." As M. Lauterbach, of Warsaw, says:—

> "The theory of historical reconstruction disregarded the history of a monument in favour of a uniform style. This has led to the reaction in favour of the simple preservation of the features of every period. There is need for an intermediate treatment."

This book is a mine of the latest and most authoritative information on such diverse subjects as: Modular Rules, Zones of Respect, Standard Monuments, The Danger of Dead "Museum" Cities, Ancient Buildings as the Nucleus and Centre for the Radiation of New Roads, Arboreal and Architectural Symmetry, The Need for Keeping Ancient Buildings in the Movement of Everyday Life, Archæological Sub-Soil as the Property of the State, The Value of Anastylosis, The Study of Variable Intercolumniation, Therapeutics as Applied to Monuments, The Protective Properties of Gilding, Fluo-Silification for Saccharoid Marbles, The Compositive Elements of Patinae, Petrographical Examination of the Physical and Chemical Properties of Stone, and The Use of the Stereograph as a Supplement to Photogrammetric Surveys.

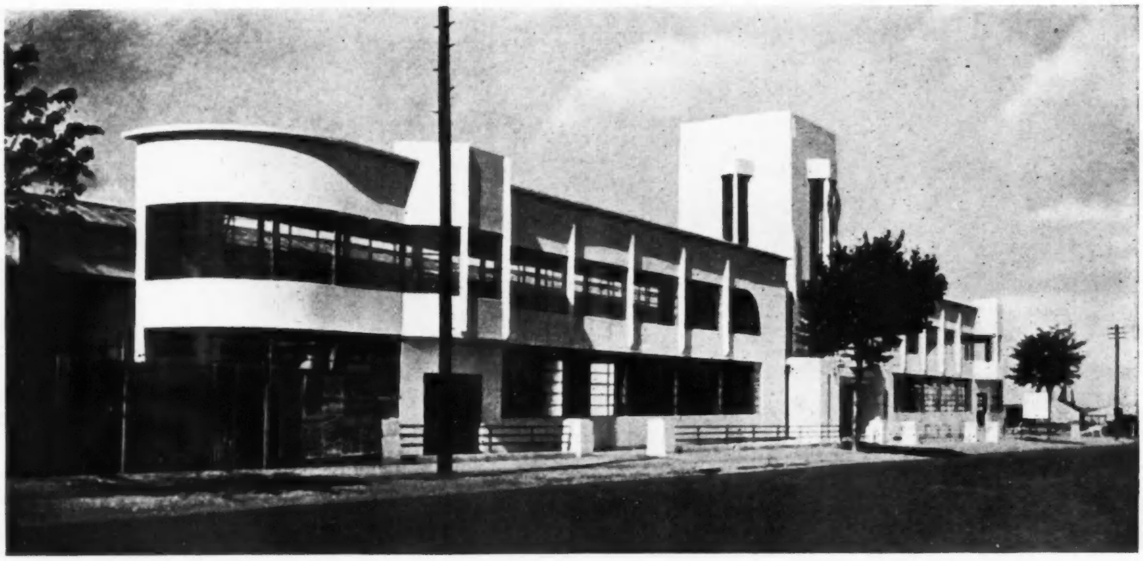
One of the most important resolutions adopted by the Congress was:—

> "Having heard various communications concerning the use of modern materials for the consolidation of ancient buildings, the experts approve the judicious use of all the resources at the disposal of modern technique, and more especially of reinforced concrete."

If only for this reason the outstanding papers are those contributed by Señor Lopez Otero, Director of the Madrid School of Architecture, on "The Function and Nature of Restoration Materials"; and Signor G. Giovannoni, Director of the Royal School of Architecture at Rome, on "Modern Building Methods Applied to the Restoration of Ancient Monuments."

The book is well printed, but there are too few illustrations (all of which are *hors texte*), and some of them make very poor collotypes. P. M. S.

FACTORY AT CROYDON:



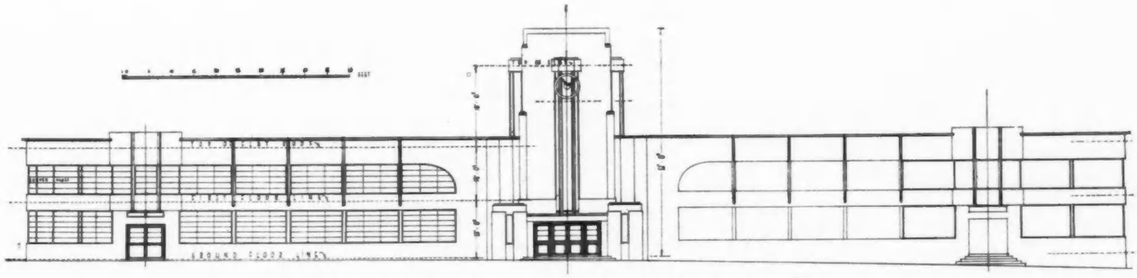
The site of this building is on the large factory area established by the Government near Croydon during the war. This area was later divided into two parts, one forming the Croydon aerodrome and the other a permanent industrial area fronting the new Brighton by-pass road.

The building here illustrated is on the road frontage of one of the existing factories and provides office and administrative accommodation for it.

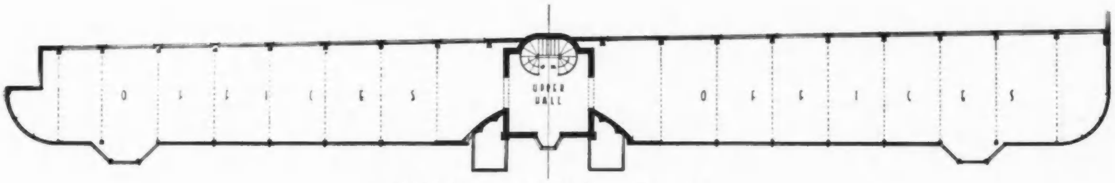
It is of steel frame construction with reinforced concrete panels between the stanchions. The floors and roof are of pre-cast hollow concrete beams, reinforced; and the staircases and the tower are of reinforced concrete. The exterior walls are sprayed white and the metal windows and doors painted a bright green.

The two photographs on this page show: top, a general view from the road; bottom, a detail of the tower.

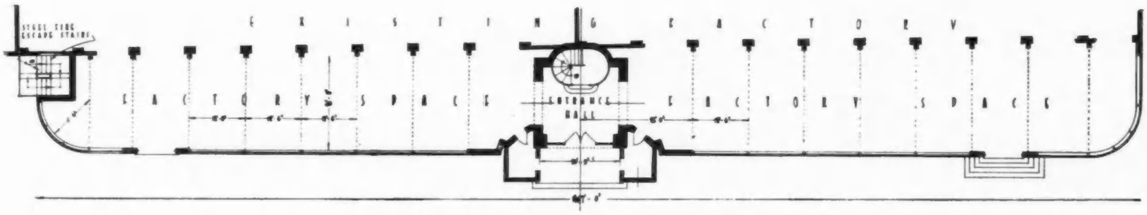
DESIGNED BY T. GRAHAM CRUMP


FIRST FLOOR LINE
GROUND FLOOR LINE

ELEVATION TO PURLEY WAY

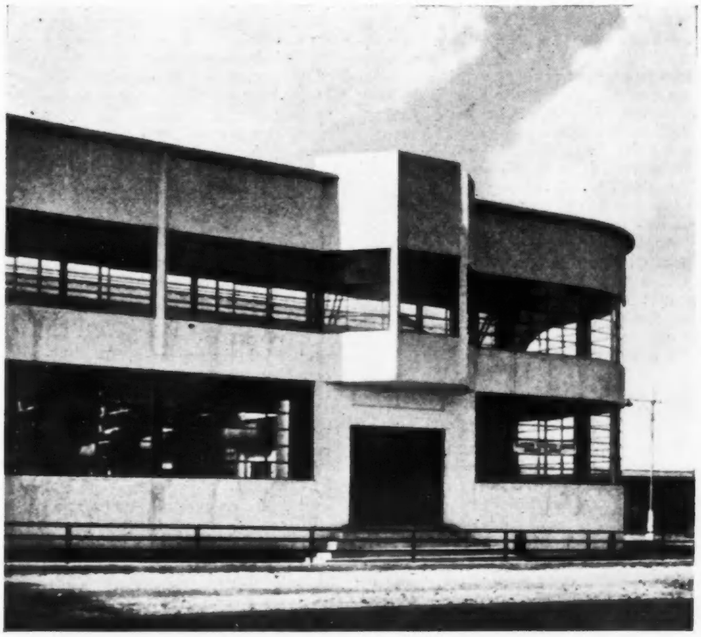

OFFICES
UPPER HALL
OFFICES

FIRST FLOOR PLAN


STEEL FIRE ESCAPE STAIRS
EXISTING FACTORY
FACTORY SPACE
ENTRANCE HALL
FACTORY SPACE

GROUND FLOOR PLAN

Above : the elevation to the main road and plans of the two floors. The factory extends back for about 700 ft. behind the new building.



Right : a wing of the new building, with offices above and factory space below.

R.I.B.A. FINAL EXAMINATIONS

Alternative Problems in Design

FOLLOWING is a list of R.I.B.A. problems in design for the year ending December 31, 1934. Additional copies of the list may be obtained free on application at the R.I.B.A.

INSTRUCTIONS TO CANDIDATES

1. The drawings, which should preferably be on uniform sheets of paper of not less than Imperial size, must be sent to the Secretary of the Board of Architectural Education, R.I.B.A., 9 Conduit Street, W.1, on or before the dates specified below.

2. Each set of drawings must be signed in ink by the author and must bear his full name and address, and the name of the school, if any, in which the drawings have been prepared.

3. All designs, whether done in a school or not, must be accompanied by a declaration from the student that the design is his own work, and that the drawings have been wholly executed by him. In the preparation of the design the student may profit by advice.

4. Drawings for subjects *a* are to have the shadows projected at an angle of 45 deg. in line, monochrome, or colour. Drawings for subjects *b* are to be finished as working drawings. Lettering on all drawings must be of a clear, scholarly and unaffected character.

5. After a design has been approved it may be re-submitted together with the specified working drawings on one of the two published dates for the receipt of drawings immediately following the date on which the design was submitted.

6. All candidates taking the Final Examination will be required to include in the four Testimonies of Study for which they must secure approval before being admitted to the Examination, at least one of the problems involving an acoustical treatment. In addition, considerations of common-sense acoustics as they apply in ordinary modern design must not be ignored in any Final Testimony of study. Where a reverberation table is asked for it should be as complete as possible and the reverberation formula should be quoted. Acoustic diagrams showing the reflection of sound beams should be to a scale of one-eighth of an inch to a foot. The two subjects set for 1934 which may be treated acoustically are Problems Nos. 2 and 5. The two subjects which may be treated acoustically may be submitted *on any of the published dates for* receiving Problems in Design in any particular year, *provided that they are treated acoustically.* Subjects taken from one year's list may not be submitted in any subsequent year. A list of articles and books on the subject to guide candidates in obtaining the necessary information may be obtained free on application to the Secretary R.I.B.A.

NO. 1.

a : A Block of Shops and Offices. In a provincial town an important road runs north and south and leads direct to the railway station, which is at the north end. The station is to be rebuilt, and sites on each side of this approach road are to be developed at the same time in order to preserve the scale and harmony of the group.

A level island site had been allocated on the east side of the approach road, having a frontage of 150 feet thereto and a depth of 50 feet. There are secondary streets on each side of the site and a service road at the rear.

On this site is to be erected a block of shops and offices, the latter being on the first and second floors.

A third floor may be added at the discretion of the candidate—preferably within the roof.

It is anticipated that some of the shops will be let to Gas and Electricity Companies as showrooms, and others to Estate Agents, and these firms may wish to rent accommodation above their shops. Upper floors not used in this way can be let off separately, and thought should therefore be given to the placing of staircases and entrances.

Each ground floor tenant will require his own heating installation, and basement accommodation may be utilized if desired.

The character given to this block should be suitable as a standard for other buildings which are to form part of the group. *Drawings required :*—Plans of basement, ground and typical upper floors, cross section and side elevation, (one-sixteenth inch scale) ; main elevation (one-eighth inch scale).

b : Working Drawings. The design for a Block of Shops and Offices may, after it has been approved, be re-submitted with the addition of:—Typical cross-section and external elevation for full height and of sufficient width to explain typical window treatment (half-inch scale).

NO. 2.

In accordance with instruction to Candidates No. 6 (above), this problem may be treated acoustically.

a : A Design for a Boys' Club in an industrial quarter of a large manufacturing town.

The rectangular site, which is level, is 150 feet by 75 feet. The south end of the site is on to a main road and there is a 10 foot passage on the west side giving access to tenements at the rear. On the north end and the east side there are high buildings and no rights of light on either property.

The accommodation is to provide for a small Assembly Hall to seat 300 people on the ground floor. A Gallery for not more than 75 is optional. This Hall must be so arranged that it may be let to other organizations during Club hours without interference with the running of the Club. It must be defended from traffic noises on the main road, and must give good acoustic conditions for general purposes.

Other accommodation required is an Entrance Hall about 500 feet super, with Reading Room and Canteen adjoining. Three Classrooms about 250 feet super each and a Chapel about 500 feet super. A Gymnasium about 1,250 feet super is required in the basement, and on the first floor there should be two full-size Billiard Rooms and a Four Room Flat for a resident Warden. Sanitary accommodation must be provided for the boys and also for voluntary workers of both sexes, and for the Hall, in addition to the Club.

Care must be taken to prevent the transmission of noise as between various departments of the Club itself and also as between the Club and adjoining property. For this reason adequate space must be left for wall and floor thicknesses.

About 2,000 feet super Playground to be provided, either as a courtyard or on a flat roof.

Drawings required :—One-eighth scale plan of each floor ; two elevations ; two sections ; and half-inch detail of the entrance.

In regard to sound insulation, the general principles followed should be stated briefly and one or two details given of typical insulation treatment of walls, and floors, and also of party walls, if any. Candidates who are treating this problem acoustically are required to submit in addition a reverberation table of the Assembly Hall to give an analysis of the Hall with full audience and one-third audience.

b : Working Drawings. The design for the Boys' Club may, after it has been approved, be re-submitted as complete working drawings to one-eighth scale with a half-inch detail of the Assembly Hall. It is assumed that all services are in the main road on the south side and not in the side road.

NO. 3.

a : A Dormy House at a Golf Club. The Dormy House is a separate building from the Golf Club House and is situated at some little distance from the Club House.

The site is level and ample in extent, the public roadway runs along the west boundary of the site, while to the south there is a view over the golf links. A garden is required. The lay-out is left to the Architect.

The following accommodation is required :—Entrance and office ; lounge with bar ; sitting room, card room, writing room (this accommodation may be provided as separate rooms or as one room if quiet can be obtained in part) ; billiard room (two tables) ; dining room, capable of seating 60 diners ; terrace and sitting out accommodation is desirable ; cloakrooms and lavatories should be conveniently placed. The kitchen department and services should be convenient ; with ample provision for larders, storage and cellarage ; steward's sitting room ; servants' sitting room ; heating arrangements should be carefully considered. Provision for a drying room should be made.

The bedroom requirements are as follows :—32 bedrooms for guests (12 of these double rooms) ; 12 bathrooms for guests ; w.c.'s, etc.; bedroom accommodation for 12 servants ; steward's bedroom ; two servants' bathrooms. The bedrooms should be planned with hanging cupboards and fitments, and basins with running water should be provided. The bedrooms service, H.M.C.'s, linen cupboard, etc., should be convenient and ample. Staircases and ways of escape should be carefully considered. Garage accommodation for 12 cars.

Drawings required :—Plans ; two elevations, one section (one-sixteenth inch scale). Block plan of buildings in relation to roadway and garden to one-thirty-second inch scale.

b : Working Drawings : The design for a Dormy House may, after it has been approved, be re-submitted, with the addition of full one-eighth inch scale working drawings, together with half-inch scale constructional section.

NO. 4.

a : A Design for a Housing Scheme.—A local authority proposes to carry out a slum clearance and re-housing scheme in an area already fully developed. All the old houses have been condemned by the Medical Officer and many are empty. It is proposed to clear the site and re-house 80 families on the same site of five acres. The population is to be accommodated in five storey buildings, i.e., three storeys of flats with maisonettes above, but, if desired, a few families may be re-housed in cottages. At least half an acre must be set aside as a children's playground fully equipped. The site is rectangular, and measures 650 feet from north to south, and 336 feet from east to west ; it has main road frontage with main drainage on the north and south sides. The ground falls from north to south at an even gradient of 1 in 20.

Forty of the dwellings must be provided with three bedrooms and the remainder with two bedrooms. A bath and w.c. for each dwelling is required.

(NOTE :—No flat should exceed a total floor area of 880 square feet, and in the case of cottages 950 square feet measured on both floors.)

Drawings required :—(1) Lay-out plan to 1/500th scale, showing buildings (in block), roads, paths, gardens and playground. (2) One-sixteenth inch scale plans, elevations and sections, sufficient to show each type of dwelling and method of grouping.

b : Working Drawings : The design for a Housing Scheme may, after it has been approved, be re-submitted with the addition of :—(1) Complete working drawings to half-inch scale, showing plans of each floor, sections and elevations of one unit of a block. (2) Drainage plan of the whole scheme to 1/500th scale, showing direction and size of drains on the "combined" system. It may be assumed that drainage generally will flow to the main sewer on the southern boundary, but, if desired, buildings sited adjacent to the northern boundary may be connected to the northern main sewer.

No. 5.

In accordance with instruction to candidates No. 6 (above), this problem may be treated acoustically.

a : A Design for a School Hall.—A Hall forming a separate block is to be added to a large technical school. A site has already been reserved in the rear and there is to be a separate public entrance from a quiet road at the back of the site.

The Hall is to be used for a variety of purposes. Funds, adequate but not profuse, for good work throughout, are available. The Hall block is intended to be a worthy addition to the school and the whole is to be used on occasions for receptions.

The Hall is to seat 800 persons in the auditorium on speech days at about 6 square feet per person. It will also be used for lectures and classes at which only small audiences are present. A large part o the floor area is to be flat to allow for examinations and for dances. In addition, the Hall is to be used for concerts, and good musical tone for stringed instruments is desirable. Also there are to be performances of plays and amateur opera. For this latter requirement an adequate stage house is to be provided at the platform end ; but this element of the plan is to have architectural character and is to be related to the body of the Hall in a dignified manner. It is not to be merely a scenery dock when not in use for rehearsals or performances, and it may be separated, if required, from the Hall by movable partitions.

There are also required :—Entrance hall and lavatory accommodation for both sexes, and some cloakroom space ; chair store ; property store at same level as stage ; two fair sized rooms suitable for dressing rooms about 200 square feet each with suitable lavatory accommodation ; part of the auditorium seating may be in a gallery, and if this is the case suitable staircases are to be designed.

Drawings required :—One-eighth scale plans, elevation, and sections, to illustrate the scheme fully. The long section of the Hall is to show the acoustic materials used, and these materials are to be recognized in the design. Two acoustic diagrams to illustrate the propagation of sound from a principal speaker on platform.

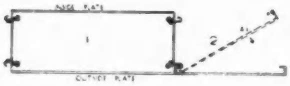
Candidates who are treating this problem acoustically are required to submit in addition a reverberation table to give an analysis of the Hall with full audience and one-third audience.

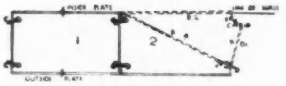
b : Working Drawings. The design for a School Hall may, after it has been approved, be resubmitted with the addition of complete working drawings of the Hall to one-eighth scale. It may be assumed that all public services may be had in the road at the back.

No. 6.

a : A Railway Terminus Hall. A design is required for a Waiting Hall in the Railway Terminus station of a large city and opening out of a General Concourse. It should have a floor area of not less than 8,000 square feet, and should provide access to waiting rooms and lavatories, restaurant and refreshment rooms, post office and telephones, and enquiry and information bureau. These rooms should not form part of the design, but the access doors to them should be indicated. Provision should also be made within the hall for the sale of newspapers, tobacco, chocolate, etc. Heavy luggage would not be brought into the hall nor would the booking of tickets take place within it. Provision should be made in the design for the exhibition of advertisements in a decorative manner. *Drawings required :*—Plan of the hall to one-eighth inch scale ; sectional elevations showing each wall to one-eighth inch scale ; and half-inch detail. *b : Working Drawings :* The design for a Railway Terminus Hall may, after it has been approved, be resubmitted with the addition of working drawings to half-inch scale.

DATES FOR THE SUBMISSION OF DESIGNS IN 1934 : Subject No. 1 : February 28 ; Subject No. 2 : April 30 ; Subject No. 3 : June 29 ; Subject No. 4 : August 31 ; Subject No. 5 : October 31 ; Subject No. 6 : December 31.


INSIDE PLATE
1
2
OUTSIDE PLATE


INSIDE PLATE
LINE OF WALL
1
2
OUTSIDE PLATE

TRADE NOTES

[*BY F. R. S. YORKE, A.R.I.B.A.*]

Thermostatic Steel Houses

STANDARD pressed-steel units for house construction, designed by Donald Brown, engineer, are, I am told, to be manufactured in the near future at Newcastle-on-Tyne. Already model sections of the standardized components are being made, one tenth full-size, and it is suggested that these be supplied to architects who will be able to design in standardized steel sections, instead of standard size bricks, and use the miniature units for building scale models to augment the usual sketch designs shown to clients.

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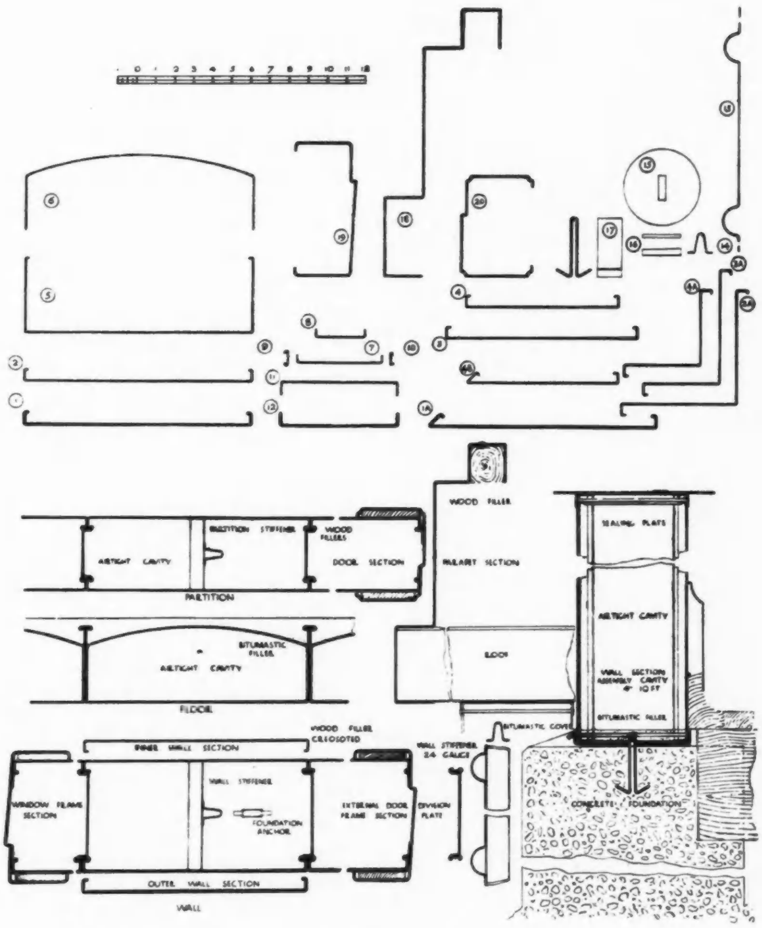
The houses are of frameless steel type, and walls are designed on the thermos-flask principle. Standard pressed-steel plates, 12 ins. long, with interlocking joints and spacers, are assembled to form 12 ins. by 6 in. cavity wall units. See diagram at head of page. External plates are $\frac{1}{8}$ in. thick and inner plates $\frac{1}{16}$ in. thick. Cavities are packed with fibrous insulating


0 1 2 3 4 5 6 7 8 9 10 11 12
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1A
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2A
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3A
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4B
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AIRTIGHT CAVITY
PARTITION STIFFENER
WOOD FILLERS
DOOR SECTION
PARTITION
BITUMASTIC FILLER
AIRTIGHT CAVITY
FLOOR
WOOD FILLER
PARAPET SECTION
SEALING PLATE
AIRTIGHT CAVITY
ROOF
WALL SECTION ASSEMBLY CAVITY 4" JOIST
BITUMASTIC FILLER
BITUMASTIC COVE
WOOD FILLER CREOSOTED
INNER WALL SECTION
WALL STIFFENER
WINDOW FRAME SECTION
FOUNDATION ANCHOR
EXTERNAL DOOR FRAME SECTION
DIVISION PLATE
WALL STIFFENER 24 GAUGE
CONCRETE FOUNDATION
OUTER WALL SECTION
WALL

Thermostatic steel house. Above : standardized component parts. 1. External wall plate $\frac{1}{8}$ in. thick ; 1a. external angle plate ; 2. internal wall plate $\frac{1}{16}$ in. thick ; 2a. internal angle plate ; 3 and 4. partition plates ; 3a and 4a. partition plates, internal angles ; 4b. partition plate, external angle ; 5 and 6. floor plates ; 7, 8, 9, 10 and 11. wall and partition spacers and clips ; 12. foundation channel ; 13 and 14. wall stiffeners ; 15, 16 and 17. foundation anchor ; 18. parapet section ; 19. window and external door frame ; 20. internal door frame. Below : method of assembling standardized component parts.

material : sawdust, cork-dust or peat-moss, and hermetically sealed with a bitumastic compound, so there should be no radiation between inner and outer faces of the wall units. The edges of the plates are turned into the sealed cavities to avoid corrosion along exposed edges.

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It is said that the plates are able to move under the influence of varying temperatures without deleterious effect, since allowance for expansion and contraction is made at the joints. These are not fixed by rivets or welds but are comparatively flexible in the bituminous sealing medium, which is not cracked by reasonable movement in the wall sections.

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Assembly is rapid, since the interlocking system is simple and foolproof, and no time is taken in jointing. Windows and doors are interlocked with the wall units as the work proceeds. A small workman's house can be erected by two men in 16 hours, given a prepared foundation. This time does not allow for installation of plumbing, heating or electrical services.

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Roofs and floors are composed of cavity-units similar to those of the walls. No cement is used, but bitumastic compound is laid over the plates. Plastering is eliminated. The surfaces of the hydraulically flattened plates are level and smooth, and after the slight radii of the ceiling joints have been filled with oil cement the plates are papered in the ordinary way.

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Special collapsible steel shuttering, assembled without bolts by interlocking plates has been designed to form the poured concrete foundations. Sufficient shuttering for a small house foundation can be assembled in half an hour and dismantled in 15 minutes by three or four workmen. When the foundation is complete a wall-channel is wedged down to anchor-pieces set in the concrete, and wall plates are assembled into wall units by the locking movement indicated in the diagram on page 461.

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I understand that a licence to manufacture these houses has been granted to a large shipbuilding firm in the North, and that works and plant are at present being prepared.

Gas-Fire Ventilation

In a brochure just issued by the Davis Gas Stove Co. is a note on the Injector ventilator. The lower or injector opening from the gas-fire canopy to the flue carries away the products of combustion, and the upper or ventilating opening draws a considerable volume of air from the room. The ascending current in the lower outlet promotes the ventilating function in the outlet above (see diagram), and whilst radiant heat is emitted to the room the air is changed frequently enough to maintain an agreeable and healthy temperature.

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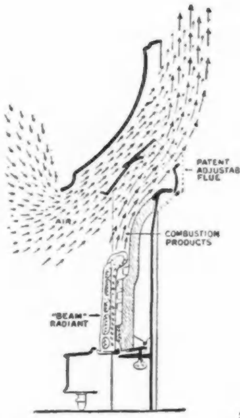
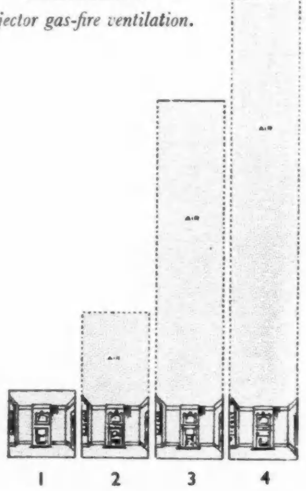
The heights of the columns in the second diagram indicate the comparative volumes of air, in proportion to the size of the room, that are carried away by means of various heating agencies.



Injector gas-fire ventilation.



A diagram illustrating the comparative volumes of air carried off in the flue by various heating agencies. (1) Room heated. (2) Insufficient air-change with old type gas-fire. (3) Air-change with injector ventilator gas-fire. (4) Air-change with coal-fire (excess tending to draughts).

A Portable Electric Heater

A new portable electric heater, with two 1 kW. elements mounted in a chromium-plated tubular-steel frame, is being made by Troughton and Young. It costs, at present, about seven guineas, but I understand it has proved popular and is now to be made in quantities and the price in consequence considerably reduced.

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In a heater of this type provision must be made to prevent the conduction of heat along the tubes. In this case the designer has overcome the difficulty by incorporating a series of metal fins between the casing to the elements and the extremities of the tubular frame.

A 2 kW portable electric heater mounted in a chromium-plated tubular steel frame. Designed by A. B. Read for Troughton and Young.

Chadwick Lectures

The first of the Chadwick Lectures for the Autumn is to be held at the Royal Society of Arts, Adelphi, W.C., on October 23, when Mr. P. W. Coombe is to speak on " The Port of London Sanitary Administration." Sir George W. Humphreys, the chairman, is also to present the Chadwick Gold Medal. The recipient on October 23 next will be Mr. P. E. L. Fellowes.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue :—

Tysoe Manor, Warwickshire (pages 447-449). General contractor, J. H. Quinton. Sub-contractors, G. N. Haden and Sons, oil-firing plant, central heating, and hot water supply ; Hornton Quarries, dressed stone work ; Stratford-on-Avon Guild, ornamental leadwork ; Standard Flat Roofing Co., asphalt flats ; Henry Hope and Sons, Ltd., steel casements and leaded lights ; T. J. Gill, stone fireplaces ; Parker, Winder and Achurch, Ltd., sanitary fittings and ironmongery ; Burbury, Laird & Co., electrical wiring and bells ; Wellstood and S. Flavel & Co., Ltd., range and grates ; Cabots Quilt and Celotex Board, sound deadening ; Tuke and Bell, Ltd., sewage plant.

Columbarium, Leeds (page 454). General contractors, Henry Atkinson. Sub-contractors : Thomas's, bricks ; Bath and Portland Stone Firms, Ltd., stone ; Leeds Marble and Heating Works, marble ; W. Aumonier and D. Hardy, carving ; Ames and Finnis, tiles ; Birmingham Guild, gates ; Mellowes & Co., windows ; Henry Hope and Sons, Ltd., ventilators ; Expanded Metal Co., reinforcement to roof ; William Watson, plaster ; W. Macfarlane & Co., rainwater pipes and heads ; De Frome Metal Workers' Guild, grids ; Manu-Marble Co., Ltd., marble flooring ; H. Braithwaite & Co., Ltd., plumbing.

Factory at Croydon (pages 458-459). General contractors, L. and W. Whitehead, Ltd. Sub-contractors : C. E. Welstead, Ltd., metal windows and doors, and metalwork to clock ; L. and W. Whitehead, Ltd., reinforced concrete ; Siegwart Fireproof Floor Co., Ltd., floor beams ; Redpath, Brown and Co., Ltd., steelwork ; Standard Flat Roofing Co., Ltd., asphalt roofing ; F. A. Norris & Co., Ltd., iron escape stairs ; Gillett and Johnston, clock mechanism ; Jewell and Whyte, electrical work ; Philips Lamps, Ltd., floodlighting ; Cement Marketing Co., Ltd., Tintocrete spraying to exterior.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

The BERMONDSEY B.C. is to erect flats on the Tanner Street and Whites Ground sites, at a cost of £32,000.

The Essex C.C. is to erect 60 cottages for employees at the BRENTWOOD Institution, and 66 cottages at the SEVERALLS mental colony.

The CROYDON Corporation has prepared its slum clearance programme, which makes provision for the erection of some 500 houses.

Plans passed by the CROYDON Corporation: Four houses, Moreland Avenue, six bungalows, Homer Road, seven houses, Camden Road, for Mr. P. Richardson; six houses, Firsby Avenue, for Messrs. Bleach and Skipper; two bungalows, Lavender Walk, for Mrs. A. Pym; 34 houses, Rockhampton Road, for Messrs. F. T. Wooding and Sons; 12 houses, Devonshire Way, for Messrs. Burcote, Ltd.; seven shops, The Glade, for Messrs. Wylie and Berlyn, Ltd.; two houses, Southbridge Road, for Messrs. F. W. Rees and Partners; three houses, Aurelia Road, for Mr. J. G. Calcot; two houses, Purley Way, for Messrs. Wills and Tapping; factory extension, Purley Way, for Mr. H. Macintosh; two houses, Beech Road, for Messrs. Chart, Son and Reading; offices, Lower Addiscombe Road, for South Suburban Co-operative Society, Ltd.; 10 houses, Church Road, for Mr. E. N. Bailey; 120 houses, off Therapia Lane, for Messrs. Wates, Ltd.; six houses, Hartland Way, for Mr. S. J. Hunt; four houses, Cobden Road, for Mr. C. S. Banks; 20 houses, Davidson Road, for Houselands, Ltd.; six shops, Hermitage Lane, for Mr. C. W. E. Remnant; alterations and additions, 71 North End, for Prices Tailors, Ltd.

Mr. R. J. Slater has prepared plans for the erection of 89 houses on East Ham and Barking by-pass, EAST HAM.

The EAST HAM Corporation is seeking sanction to borrow £10,100 for the acquisition of Runwell Hall Farm estate, Southend-on-Sea, where the Corporation is to erect a mental hospital in conjunction with Southend-on-Sea Corporation. The total cost of the scheme is estimated at £545,870.

Plans passed by the EAST HAM Corporation: Additions, rear 251-7 Katherine Street, for Mr. R. Brown; two houses, Market Street, for Messrs. J. H. Harris and Son; stores, etc., Arragon Road and Parr Road, for Mr. H. Joseph; addition to factory, High Street, for Messrs. Wheeler and Wheatley, on behalf of Messrs. Burgoyne, Burbidges & Co.; bakehouse, Katherine Road, for Mr. R. J. Slater; five houses, Park Avenue, for Messrs. Wheeler and Wheatley; 56 houses, Walton Road, for Messrs. W. Goodchild & Co.; dance hall and billiards room, Milton House, High Street, for Messrs. Seaden and Speidel; 20 houses, Grantham Road, for Messrs. Pitt and Prior Hale; additions, Winsor House, Beckton, for Gas Light and Coke Co.; two shops and club, 498-504 High Street, for Mr. F. H. Cleathero; mission hall, Roman Road, for Mr. R. J. Slater; office and store, 2 and 4 Abbots Road, for Mr. R. J. Slater.

The ESSEX C.C. has voted an estimate of £120,000 for the proposed South-East Essex technical college.

The Essex Education Committee has obtained sanction to borrow £47,000 for the erection of a new school at ILFORD.

Plans passed by the LEWISHAM B.C.: Three houses, Lowther Hill, for Mr. J. Rosenfield; 20 houses, Canobie Road, for Messrs. Snow Bros.; 29 houses, Westwood Park, for Mr. H. Macintosh; 30 houses, Chudleigh Road, for Messrs. J. W. Heath and Sons; shop premises, Bromley Road, for Messrs. Shepherd and Thomerson; two houses, Ardgowan Road, for Mr. S. F. Prior; shops and flats, 237-9 Stanstead Road, for Mr. E. C. Christmas; four Brockley Road, for Messrs. Wates, Ltd.

The Essex Education Committee is seeking sanction to borrow £29,000 for the erection of a new junior school, and the enlargement of the St. Chad's Road School, TILBURY.

SOUTHERN COUNTIES

Plans passed by the BEXHILL Corporation: Two houses, Collington Rise, for Messrs. Chessums, Ltd.; six houses, The Gorses, for Mr. R. Lutyens, on behalf of Earl de la Warr; five houses, Watermill Lane, etc., for Mr. J. E. Maynard; three houses, Walton Park, for Messrs. Tubbs and Messer; six houses, London Road, for Mr. F. Banks; lay-out, White Lodge estate, Whydown, for Mr. D. J. Williams; lay-out of land in Peartree Lane, for Mr. E. Bunce.

The BRIGHTON Corporation is to make arrangements for the erection of tenements comprising 88 flats for rehousing purposes, in connection with clearances at the Nelson and Claremont Rows areas.

The BRIGHTON Corporation has prepared a scheme for the erection of 486 houses, within the next five years.

The BRIGHTON Corporation recommends leasing land in Princes Place to Messrs. Braybons, Ltd., for the erection of premises to cost £30,000.

The BRIGHTON Corporation has approved a scheme for the construction of a pumping station at Belsdean reservoir, and other contingent water works, at a cost of £51,000.

Plans passed by the BRIGHTON Corporation: Forty-six houses, Patcham and Falmer, for Messrs. Braybons, Ltd.; 26 houses, Holtview Road, Rottingdean, for Mr. W. V. Martin; 46 houses, Heston Avenue, Patcham, for Ladies Mile Estate, Ltd.; block of flats, Coombe Road, for Mr. G. Ayling; stores, 21-3 Vine Street, for Messrs. Helmstone, Ltd.; School house, Longhill Road, for Mr. P. J. Harwood; 2 houses, Valley Drive, for Messrs. T. J. Braybon and Son; 24 houses, Wick estate, Rottingdean, for Mr. T. Addison; 18 houses, Bevendean estate, Falmer, for Messrs. W. A. Gates and Sons, Ltd.; four bungalows, Reservoir Road, for Mr. R. E. Spendlove; four houses, Hollingdean Terrace, for Mr. F. Britcher; additions, St. Andrew's Church, Moulsecoomb, for Diocesan Church Council; two houses, Stanmer Park Road, for Messrs. Wallis and Paris.

Mr. C. Haysom is in negotiation with the NEWBURY Corporation regarding the drainage of land in Pinchinton Lane, where he proposes to erect at least 100 houses.

SOUTH-WESTERN COUNTIES

Plans passed by the TORQUAY Corporation: Four houses, Lymington Road, for Messrs. S. Blatchford and Sons; showrooms, Brunswick Square, for Messrs. T. Brown and Son; two flats, Shiphay Lane, for Mr. J. Stoneman; two houses, Water Lane, Shiphay, for Mr. H. J. Breyley; two houses, Stentifords Hill, for Messrs. S. C. Eales and Sons; shop, Furzewell Cottage, St. Marychurch Road, for Mrs. E. V. Lewty.

MIDLAND COUNTIES

Plans passed by the BEDFORD CORPORATION: Conversion to three flats, 14 Park Avenue, for Messrs. Usher and Anthony; eight houses, Elstow Road and Park Avenue, for Messrs. E. H. C. Inskip and Son; two houses, Ouseland Road, for Mr. E. Two; two houses, Miller Road, for Mr. C. A. White; extensions, Elstow Road depot, for Shell-Mex and B.P. Ltd.; conversion to four flats, 9 Dynevor Road, for Mr. I. Daughtry; 24 houses, Irwin Road, for Messrs. H. C. Janes, Ltd.; alterations, Costin Street and River Street, for Messrs. Stafford, Rogers and A. W. Merry; four houses, Miller Road, for Messrs. E. H. C. Inskip and Son; alterations, 43 High Street, for Messrs. W. B. Stonebridge and H. A. Harris; two houses, De Parys Avenue, for Messrs. E. H. C. Inskip and Son; six houses, Rosamond Road, for Mr. T. A. Gray; new premises, Newnham Street, for Mr. F. Gale; additions, 19 St. John's Street, for Mr. G. J. Tucker.

The DUDLEY Corporation has prepared a programme for the erection of 760 houses during the next five years.

Plans passed by the DUDLEY Corporation: Four houses, Stourbridge Road, for Messrs. Lloyd Bros.; four houses, Pedmore Road, for Mr. W. H. A. Smith; two houses, Buffery Road, for Mr. J. E. Watchorn; 28 houses, Priory estate, for Mr. W. Whittingham; two houses, Himley Road, for Mr. H. J. Caddick; warehouse, Vicar Street, for Messrs. W. H. Smith and Son; new offices and alterations, Dibdale Street, for Scrim Manufacturing Co., Ltd.; six houses, Priory Road, for Messrs. Brookes Bros.; 12 houses, Baptist End Road, Netherton, for Mr. H. Smart; six houses, Dudley Wood, for Mr. T. L. Tibbetts.

The KETTERING U.D.C. has agreed upon a scheme for the erection of 107 houses.

The KETTERING U.D.C. has approved a revised lay-out for the erection of 124 houses, on the Pipers Hill estate.

The SMETHWICK Corporation proposes the erection of a further 220 houses, on the Warley estate.

NORTHERN COUNTIES

Plans passed by the BLYTH Corporation: Two houses, Barras Avenue, for Messrs. Pattison and Hush; two houses, Barras Avenue, for Mr. Thos. Hedley; four houses, Wolmer Road, for Mr. Wm. Swann; 16 flats, Hodgsons Road, for Messrs. J. and W. Simpson; four flats, Shotton Avenue, for Mr. J. J. Robson; 14 flats, Claremont Terrace, for Mr. W. Parsons; 10 houses, Gordon Road, for Mr. S. R. Robertson.

Plans passed by the ECCLES Corporation: 56 houses, Wilfred Road, Greenfield Avenue and Laburnum Avenue, for Mr. H. L. Pollitt; extension of Cavendish Road and two new roads off, for Bridgewater Estates, Ltd.; two houses, Cavendish Road, for Mr. J. Ogden.

Plans passed by the IRLAM U.D.C.: Two houses, Springfield Lane, for Messrs. Massey and Hutchinson; two houses, Rivington Grove, for Messrs. T. E. and J. A. Brew; two houses, Liverpool Road, for Messrs. Dodd and Beswick; Cadishead, for Mr. H. G. Salt; two shops, Liverpool Road, for Mr. H. Milner.

The LEEDS Corporation has approved plans for the erection of public washhouses and alterations at the existing baths at Meanwood Road, at a cost of £12,000.

Plans passed by the SEDGLEY U.D.C.: Two houses, Duddling Road, for Mr. S. Brooks; 10 houses, Kings Road, for Mr. L. Brown; two houses, Goldthorn Hill, for Miss E. A. Simkiss; two houses, Robert Street, for Mrs. F. Russell; four houses, Dudley Walk, for Mr. T. Pearson; two houses, Rosemary Avenue, for Messrs. A. L. and A. A. Moore; two houses, Ward Road, for Mr. C. Sutton; two houses, Claremont Road, for Mr. N. Hyde; 30 houses, off Temple Street, for Mr. J. Horton.

The SHIPLEY U.D.C. has received sanction to borrow £18,450, for the erection of 60 houses on the Crag Road estate.

Plans passed by the SHIPLEY U.D.C.: Eleven houses, Grosvenor Avenue, for Mr. H. Chippendale; 40 houses, off Wrose Road, for Mr. F. Dalby; four houses, Poplar Crescent, for Messrs. Dale and Wild; six houses, Westfield Lane, for Mr. A. Greenwood; 18 houses, Moorhead Crescent, for Mr. C. Houlden; eight houses, Wrose Mount, for Messrs. Walton Bros.; four houses, Oakdale Drive, for Messrs. A. and F. Mellor.

The WARRINGTON Corporation has received sanction to borrow £32,885 for the erection of 112 houses on the Bewsey estate, and £3,010 for street works in connection with these houses.

Plans passed by the WIGAN Corporation: Two houses, Walkden Avenue, for Mr. I. Kenyon; two houses, Didlow Lane, for Mr. M. Liptrot; four houses, Spenver Road, for Messrs. Dickinson & Tickle; four houses, Holme Avenue, for Mr. G. Hall; two houses, Warrington Road, for Messrs. Gore & Gee; club extensions, Coppull Lane, for Swinley Labour Club.

The YORK Corporation has prepared a scheme for the provision of 1,200 houses, at a cost of £463,000.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen ; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	BANBURY	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A_1	Bristol	S.W. Counties	1 5	1 0¾
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A	Cumberland	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E Coast	1 5½	1 1¼
A	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	HALIFAX	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	JARROW	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	LANCASTER	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	PAISLEY	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	TAMWORTH	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1¼
A	Tyne District	N. E. Coast	1 5½	1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	YARMOUTH	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
Thames Ballast	per Y.C.		6	9
⅝" Crushed Ballast	,,		7	6
Building Sand	,,		7	9
Washed Sand	,,		8	9
2" Broken Brick	,,		8	3
⅝" ,, ,,	,,		11	6
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	9	2	6
,, Wirecuts	,,	8	2	6
,, Brindles	,,	7	6	6
,, Bullnose	,,	9	14	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	8	8	0
Luton Facings	,,	8	0	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

				s.	d.
Good carcassing timber		F.C.		2	2
Birch		as 1" F.S.			9
Deal, Joiner's		,, ,,			5
,, ,, 2nds		,, ,,			4
Mahogany, Honduras		,, ,,		1	3
,, African		,, ,,		1	1
,, Cuban		,, ,,		2	6
Oak, plain American		,, ,,		1	0
,, Figured ,,		,, ,,		1	3
,, Plain Japanese		,, ,,		1	2
,, Figured ,,		,, ,,		1	5
,, Austrian wainscot		,, ,,		2	6
,, English		,, ,,		1	11
Pine, Yellow		,, ,,		1	0
,, Oregon		,, ,,			4
,, British Columbian		,, ,,			4
Teak, Moulmein		,, ,,		1	3
,, Burma		,, ,,		1	2
Walnut, American		,, ,,		2	3
,, French		,, ,,		2	3
Whitewood, American		,, ,,		1	1
Deal floorings,	¾"	Sq.		19	0
,,	⅞"	,,	1	1	6
,,	1"	,,	1	3	6
,,	1¼"	,,	1	7	6
,,	1½"	,,	1	12	0
Deal matchings	⅝"	,,		14	0
,,	¾"	,,		15	6
,,	1"	,,	1	4	0
Rough boarding	¾"	,,		16	0
,,	1"	,,		18	0
,,	1½"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1½"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	,,	8	6
,, ,, ⅜"	,,	8	3
,, ,, ½"	,,	8	0
,, ,, ¾"	,,	7	6
,, ,, ⅞"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	,,	5	0	8	6
Boots	,,	3	3	4	5
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	1	0
,, drawn pipes	,,		18	0
,, soil pipe	,,	1	5	0
,, scrap	,,		13	6
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			10½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s. d.		s. d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.			2⅞
,, ,, 26 oz. ,, ,, ,, ,,	,,			3¾
Arctic glass, white	,,			7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,			6½
¼" Hartley's rough rolled	,,			7
¼" ,, wired cast	,,			10
¼" Georgian wired cast	,,			11
¼" Polished plate, n/e 1 ft.	,,	†7½	to	‡1 0
,, ,, 2	,,	†10	,,	‡1 3½
,, ,, 3	,,	†1 4½	,,	‡1 10
,, ,, 4	,,	†1 11	,,	‡2 4
,, ,, 6	,,	†2 3	,,	‡2 7½
,, ,, 8	,,	†2 5	,,	‡3 0½
,, ,, 12	,,	†2 10	,,	‡3 3½
,, ,, 20	,,	†3 3½	,,	‡3 9
,, ,, 45	,,	†3 6½	,,	‡4 0½
,, ,, 65	,,	†3 11½	,,	‡4 4
,, ,, 90	,,	†4 4	,,	‡4 9
,, ,, 100	,,	†4 6	,,	‡4 11
Vita glass, sheet, n/e 1 ft.	,,			1 0
,, ,, ,, ,, 2	,,			1 3
,, ,, ,, over 2	,,			1 9
,, ,, plate, n/e 1 ft.	,,			1 6
,, ,, ,, 2	,,			3 0
,, ,, ,, 5	,,			4 0
,, ,, ,, 7	,,			5 0
,, ,, ,, 15	,,			6 0
,, ,, ,, over 15	,,			7 6
Putty, linseed oil	lb.			3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	0
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12″ deep and cart away	Y.S.		2	0
„ to reduce levels n/e 5′ 0″ deep and cart away	Y.C.		8	0
„ to form basement n/e 5′ 0″ deep and cart away	„		9	0
„ „ 10′ 0″ deep and cart away	„		9	6
„ „ 15′ 0″ deep and cart away	„		10	0
If in stiff clay . . . add	„		2	6
If in underpinning . . . „	„		4	0
Digging, return, fill and ram . . . „	„		4	0
Planking and strutting to sides of excavation	F.S.		1	0
„ „ to pier holes	„			5
„ „ to trenches	„			5
„ „ extra, only if left in	„			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	„	1	6	0
„ „ „ (4-2-1)	„	1	12	6
„ „ „ underpinning	„	1	10	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 6	2 3
Extra only for bends	Each	2 8	3 9
„ junctions		3 0	4 0
Gullies and grating	„	16 6	18 0
Cast iron drains, and laying and jointing	F.R.	4 9	6 9
Extra, only for bends	Each	10 6	15 6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
„ „ in cement	„	29	15	0
„ Stocks in cement	„	35	15	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			5½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
¾″ Horizontal dampcourse	Y.S.	4	6
¾″ Vertical dampcourse	„	6	9
¾″ paving or flat	„	4	0
1″ paving or flat	„	5	6
1″ × 6″ skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	3	10	0
Do., 18″ × 9″	„	3	7	0
Do., 24″ × 12″	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles.	„	2	16	0
20″ × 10″ medium Old Delabole slating, laid to a 3″ lap (grey)	„	4	6	6
„ „ „ „ „ „ (green)	„	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾″ deal sawn boarding and fixing to joists	Sqr.	1	14	6
1″ „ „ „ „	„	1	17	6
1¼″ „ „ „ „	„	2	3	0
¾″ × 2″ fir battening for Countess slating	„		9	6
Do. for 4″ gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9″ joists	F.R.			10½
1″ deal gutter boards and bearers	F.S.		1	2
1½″ „ „ „ „ „	„		1	6
2″ deal wrought rounded roll	F.R.			8
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼″ do.	„	2	12	6
1½″ do.	„	2	19	0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1¼″ do.	„		1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½″ deal moulded sashes of average size	F.S.	1	11
2″ „ „	„	2	1
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1½″ heads, 1″ inside and outside linings, ⅜″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	3	9
2″ „ „ „	„	4	0
Extra only for moulded horns	Each		6
1½″ deal four-panel square, both sides, door	F.S.	2	0
2″ „ „ „	„	2	8
1½″ „ but moulded both sides	„	2	4
2″ „ „ „	„	3	0
4″ × 3″ deal, rebated and moulded frames	F.R.	1	2
4½″ × 3½″ „ „	„	1	8
1¼″ deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½″ deal moulded wall strings	„	2	1
1½″ „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3″ × 2″ deal moulded handrail	F.R.	1	3
1″ × 1″ deal balusters and housing each end	Each	2	0
1½″ × 1½″ „ „	„	2	9
3″ × 3″ deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	6
Do. in flashings		1	18	0
Do. in covering to turrets, etc.	„	2	4	0
Do. in soakers	„	1	10	0
Labour to welted edge	F.R.			3½
Open copper nailing	„			3½
Close „ „	„			4½

		½″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	„	6½	8	9	11	1	—
Boiler screws and unions	„	3 3	3 9	5 0	8 0	—	—
Lead traps	„	—	—	—	6 3	8 9	—
Screw down bib valves	„	6 9	9 6	11 0	—	—	—
Do. stop cocks	„	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	2	9
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	9
Do. vertical	„		2	3
Rough render on walls	„		1	4
Render, float and set in lime and hair	„		2	0
Render and set in Sirapite	„		2	2
Render, backing in cement and sand, and set in Keene's cement	„		3	1
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R.			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1″ girth	„			1½
1″ granolithic pavings	Y.S.		3	6
1½″ „	„		4	6
6″ × 6″ white glazed wall tiling and fixing on prepared screed	„		17	6
9″ × 3″ „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

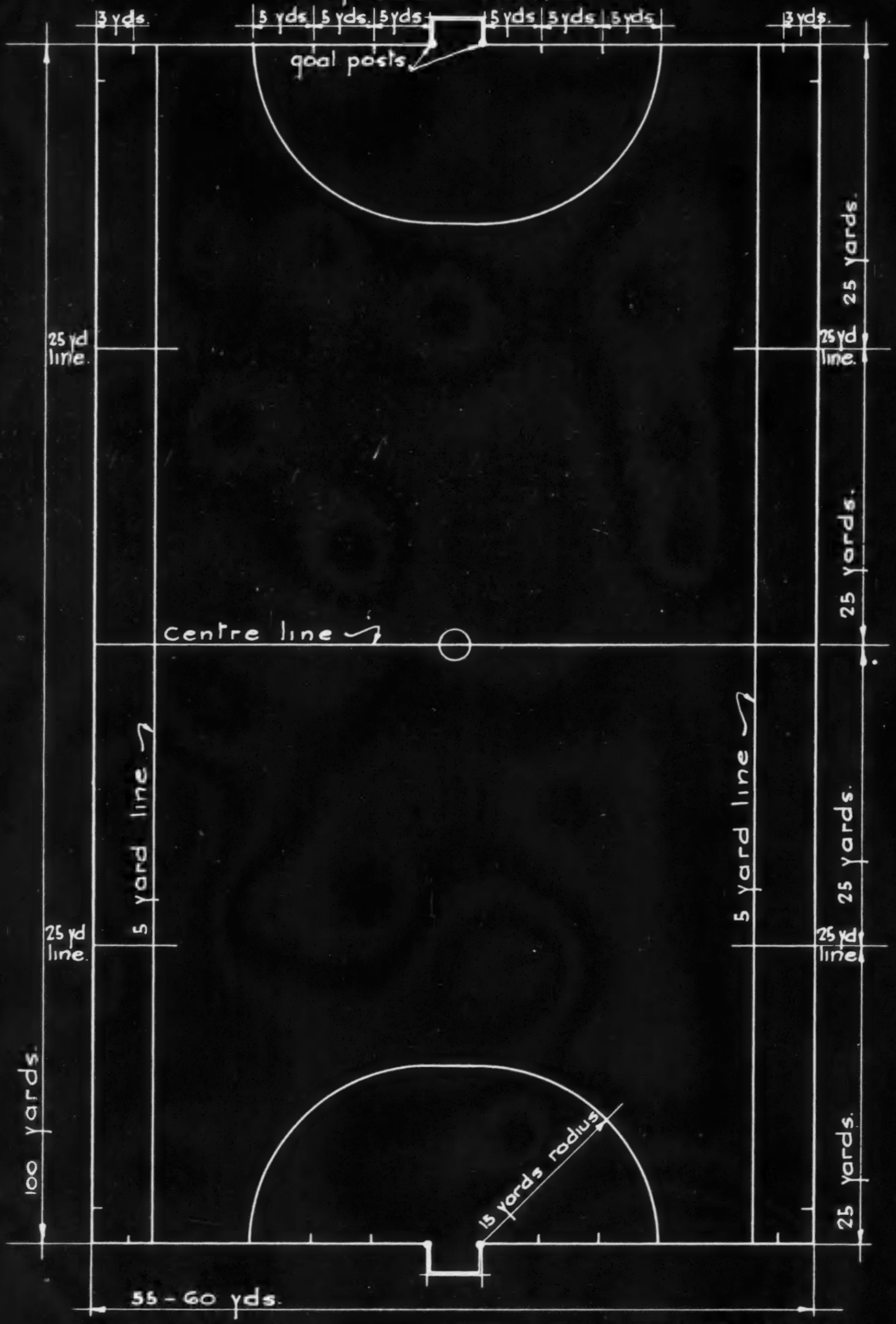
		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		0½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	„	2	9

WOMENS' HOCKEY.
length of field 90 - 100 yards
width of field 55 - 60 yards
FOR SCHOOLS:
length of field.. minimum 85 yards.
width of field.. minimum 55 yards.

goal posts 12'0" apart.
7'0" high.
goal area .. 12'0" - 7'0"


3 yds.
5 yds.
5 yds.
5 yds.
5 yds.
5 yds.
5 yds.
3 yds.
goal posts.
25 yd line.
25 yd line.
25 yd line.
25 yd line.
25 yards.
25 yards.
25 yards.
25 yards.
centre line
5 yard line
5 yard line
100 yards.
15 yards radius.
55 - 60 yds.

PLAN OF FIELD. Scale: 40'0" to 1"

INFORMATION SHEET: HOCKEY PLAYING FIELD.

SIR JOHN BURNET, TAIT AND LORNE. ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

• 45 •

LAY-OUT OF HOCKEY FIELD

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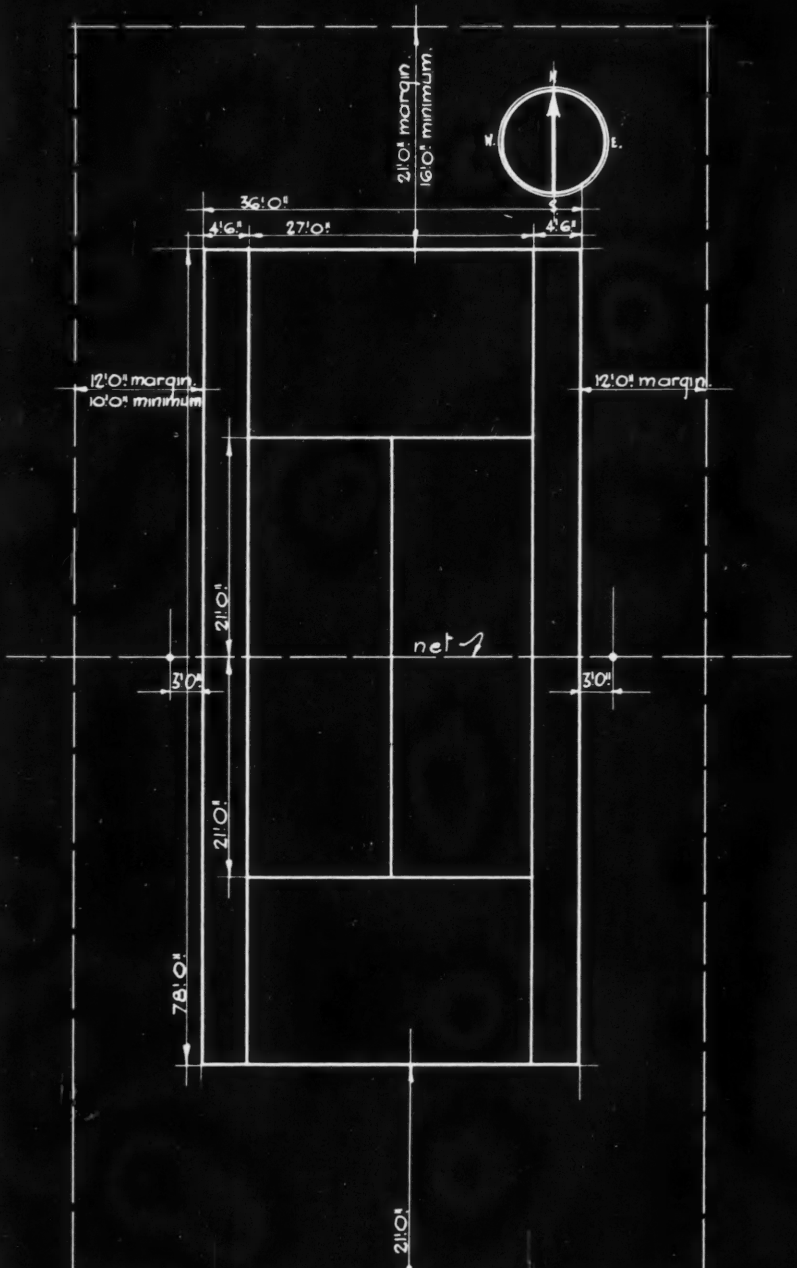
THIS week we publish the first and second of a series of Information Sheets devoted to the requirements of various games. The Sheets accompanying this issue show the lay-outs of a hockey playing field and a tennis court. The third and fourth of this series, giving the lay-outs of Rugby and Association playing fields, will be published next week.

The following is a full list of the subjects previously issued :—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units : 1.
13. Apr. 12—Lavatory Units : 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs : 1.
23. June 29—Concrete Stairs : 2.
24. July 6—Pressed Steel Stairs : 1.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs : 2.
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes : 1.
30. Aug. 17—Lay-out of Wardrobes : 2.
31. Aug. 24—Common Sizes Miscellaneous.
32. Aug. 24—Electric Lighting : I.
33. Aug. 31—Electric Lighting : II.
34. Aug. 31—Electric Lighting : III.
35. Sept. 7—Electric Lighting : IV.
36. Sept. 7—Vacuum Cleaning Systems.
37. Sept. 14—Steelwork : I.
38. Sept. 14—Steelwork : II.
39. Sept. 21—Steelwork : III.
40. Sept. 21—L.C.C. Waivers : I.
41. Sept. 28—L.C.C. Waivers : II.
42. Sept. 28—L.C.C. Waivers : III.
43. Oct. 5—L.C.C. Waivers : IV.
44. Oct. 5—Phorpres Cellular Flettons.

Height of net at centre .. 3'0"., at ends .. 3'6".
Net posts should be 3'0" away from side line .


21'0" margin.
16'0" minimum.
N
W.
E.
S
36'0"
4'6"
27'0"
4'6"
12'0" margin.
10'0" minimum
12'0" margin.
21'0"
net
3'0"
3'0"
21'0"
78'0"
21'0"

PLAN OF DOUBLES COURT
Scale 16 feet to 1 inch.

INFORMATION SHEET : LAYOUT OF TENNIS COURT.
SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON. W.C.1.

INFORMATION SHEETS • 46 • LAY-OUT OF TENNIS COURT

Supplement to THE ARCHITECTS' JOURNAL for October 12, 1933

INFORMATION SHEETS

• 46 •

LAY-OUT OF TENNIS COURT

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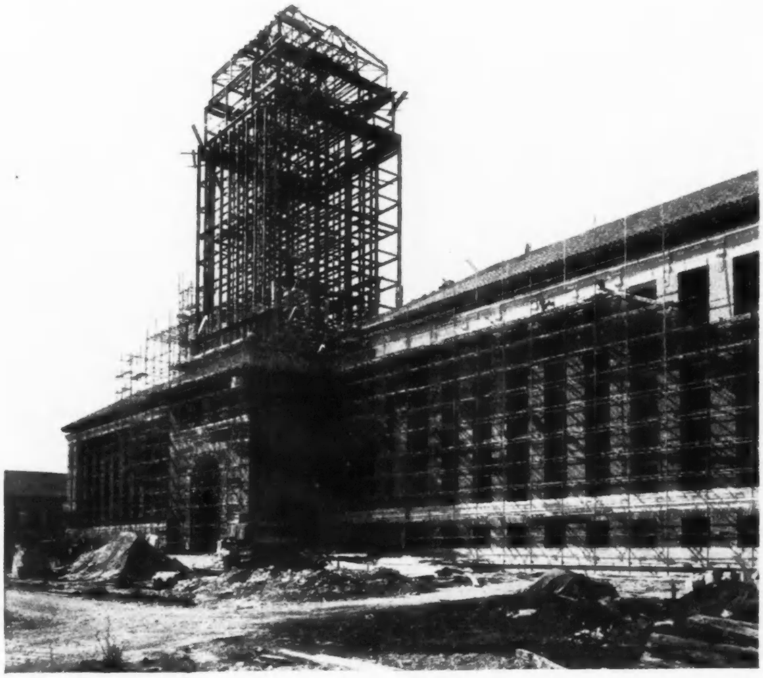
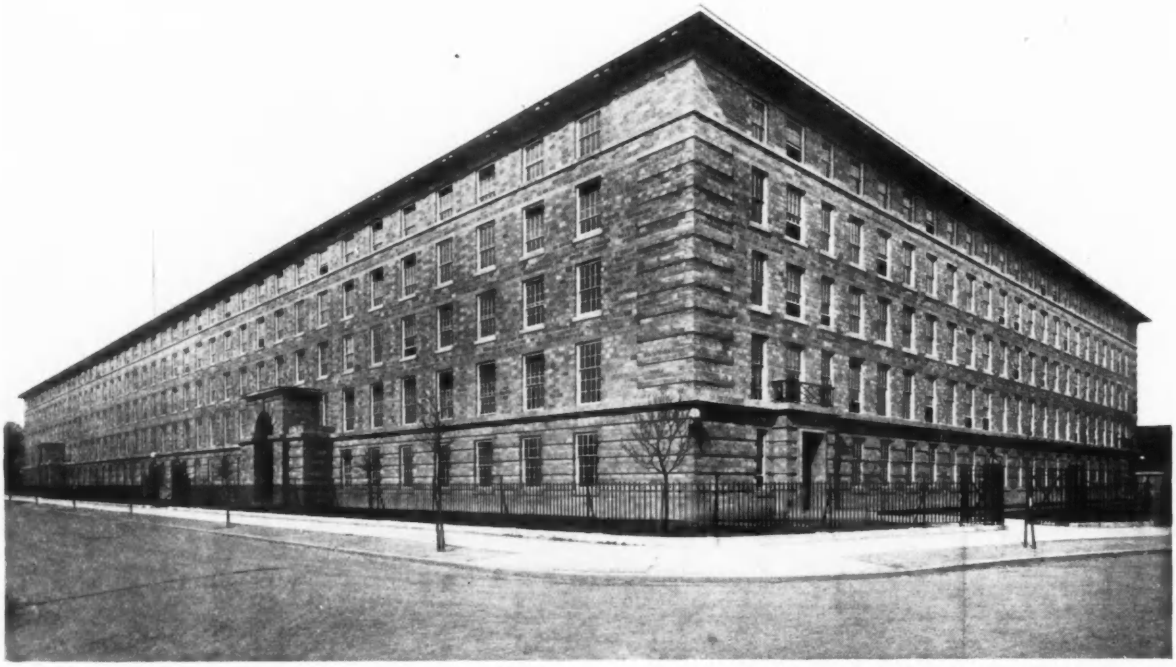
FOR a list of the Information Sheets previously issued, see the other Sheet accompanying this issue.

UNDER CONSTRUCTION

CAMBRIDGE UNIVERSITY LIBRARY



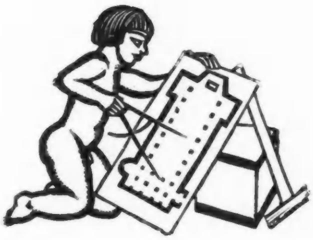
A RECENT photograph of the new Central Library for the University of Cambridge, designed by Sir Giles Gilbert Scott, R.A., and now nearing completion. The tower is used for the storage of books from the sixth up to the eighteenth floor, and there are altogether 47 miles of book stacks.



[*Photograph by permission of H.M. Office of Works.*

THE MINISTRY OF PENSIONS

The Ministry of Pensions building at Acton, designed in 1922 for H.M. Office of Works by J. G. West, who has now been appointed Chief Architect to that department in succession to Sir Richard Allison. Though not universally appreciated when it was built, it is now recognized (for its logical and straightforward qualities) as one of London's contributions towards a sensible contemporary architecture.



THE INSTITUTE OF INDUSTRIAL PSYCHOLOGY

NO doubt the majority of architects have heard of the Institute of Industrial Psychology, and know why it was formed, and how it works for the betterment of conditions affecting the worker, and consequently for greater efficiency and increased production in industry ; but perhaps not many realize how much more efficient planning in industrial buildings may be achieved through co-operation between the Institute and the architect.

It is probably reasonably accurate to say that almost all factories built more than ten or twelve years ago are now obsolete ; new machinery and new methods have been introduced, and in many cases the product for which the factory was built, or more probably evolved, has itself been considerably modified. The purpose of the building has changed, but the building itself is not flexible and cannot properly fulfil the demands made upon it, and should now be superseded. Movement within it is hampered and machinery congested ; operations do not follow one another in logical sequence, and time and energy are wasted.

But the manufacturer has seen these changes taking place gradually, and the present organization (or lack of it) appears quite logical to him ; he has done a certain thing in a certain way for several years, and cannot get a detached view of a process as an abstract problem ; he finds nothing absurd in making a spring or fish-hook five hundred yards from the hardening shop in the north, and equally distant from the plating shop in the south, and employing a man to push a truck here and there so that the article can be hardened and plated, and then requiring more pushing so that it can be packed and dispatched.

He, naturally, fails to see why he should rebuild, and is only likely to be persuaded to regard rebuilding as a measure of economy if an outsider, a specialist who can approach the problem with an open mind, without preconceived ideas, is able to prove that there will be a saving ; that in so many years he will have written off the cost of his new building through reduction in running costs.

The job of proving this is a highly technical one that can only be done by an industrial specialist, a man who understands production methods and the sequence of industrial operations, and can show exactly how a new building is to be run and where savings are to be made and, in detail, the extent of these savings, and demonstrate that the juxtaposition of certain machines and certain shops will prove more efficient than any other of many possible and seemingly reasonable arrangements.

The Institute of Industrial Psychology enquired at first only into the conditions of the individual at the bench, trying to make him as happy and efficient as possible, but found that output could not be greatly increased by considering only the worker ; that it was the general lay-out rather than immediate surrounding in a particular department that handicapped the individual at the start. Limitations imposed by the management, unorganized supply of material, illogical process of production, and so on, were the real cause of inefficiency in industry.

The Architects' Journal
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Buildable
Parl.
London

NOTES & TOPICS

COMPENSATION FOR SOCIAL CRIME

SIR Hilton Young has with some blunt words re-focussed the official view of slum clearance so that the moral and social realities of the question are apparent.

*

The Southampton Borough Council was responsible for bringing Sir Hilton's penetrating reproof upon those bodies who plead for delay while legislation is passed to compensate slum owners. He said: "It will not, I imagine, be contended that a man is entitled to make a profit out of selling the use of bad houses any more than out of selling bad meat."

*

If at last our rulers have lost a little of their inhuman respect for property, enough to embolden them to snub immoral landlords who demand compensation for social crime, it will help to offset the economies that have been made during the last hundred and fifty years in elementary Christian regard for the welfare of slum-dwellers.

*

No politician has ever talked of compensation for those neglected children of streets made mean by the darkest and most despicable avarice.

THE MOTIVE BEHIND SLUM CLEARANCE

Last Saturday, Mr. E. Maxwell Fry, giving the first of a series of five public lectures at the Architectural Association on "Slums in the City and the Country" pointed out that slum clearance, far from being a matter of urgency to be disposed of in five years, was but a further link in the chain of social regeneration.

*

It implied far more than the building of blocks of fresh dwellings. Unless with every penny we spent we aimed at improving the whole life of the poor, then what slum clearance we did would be in vain.

*

What is wanted, Mr. Fry made clear, is a revival of the sense of social and civic responsibility. And Sir Hilton Young's well-timed severity with the inhumanitarians of Southampton suggests that such a revival could be got under way by plain speaking in high places.

H. M. O. W.

Sir Richard Allison, who retires in January after forty-five years at the Office of Works, has seen a remarkable series of developments in that department. When he first set foot there the staff numbered about two hundred all told—today there are nearer two thousand.

*

The architectural section was at one time divided into three departments, with an architect at the head of each; but, after the war, the reorganization of H.M.O.W. put all three under Sir Richard, as Chief Architect.

*

The results of this move are clearly to be seen in the high standard of design which today marks all buildings erected by the Government, although Sir Richard has all along been careful not to labour his own personality too much. He has wisely been, as it were, final arbiter on matters of design, and has thus encouraged and stimulated his assistants in their various spheres.

*

It would have been so easy to "mass-produce" or standardize a personal characteristic or mannerism; by avoiding too vigorous a dictation, the Office of Works produces appropriate variety, and one is conscious of a humanism underlying government work, in whatever sphere.

*

Mr. J. G. West, O.B.E., who succeeds Sir Richard Allison as Chief Architect, has many years' experience of the Office of Works, and will not be slow to profit from an able tutorship. The freedom and scope which has in the past

SLUM

IN our issue for October 5 we concluded our survey of the housing and slum clearance problems in fourteen provincial cities. Next week's issue of THE ARCHITECTS' JOURNAL *will be devoted to a similar survey of London, and will include a tentative estimate of the housing needs of Britain.*

Left: Sir Richard Allison, whose retirement from the post of Chief Architect to H.M. Office of Works is announced.

Right: Mr. James Grey West, O.B.E., who has been appointed to succeed Sir Richard Allison. See Astragal's note.

been allowed to the departmental heads makes it certain that the breadth of outlook and wise, experienced administration will continue uninterrupted by this change of leadership.

WHAT THE PUBLIC READS ABOUT ARCHITECTURE

A five-weeks' business trip in Sweden and her lifelong work on the " health and mental side of architecture " has convinced Miss Grace Cope that " in domestic engineering we are one of the most backward of nations."

*

Interviewed recently by *The Star*, Miss Cope (the first woman to be made an honorary member of the Incorporated Association of Architects and Surveyors) declared that " English architects and builders want a bomb to shake them up a bit."

*

Practically any woman with a technical qualification, honorary or otherwise, is regarded as " news " by the popular press whenever she cares to prattle critically about anything or nothing. What she has to say doesn't matter ; the mere fact that a weak woman is capable of articulate comment fills editors with awe.

*

We have the confident authority of Miss Cope for the statement that English architects are 50 years behind the times in domestic architecture, and her modest assurance that she would " like to see many more women architects, for surely a woman knows better than a man what is required of a house."

*

The Star informs its readers that " Miss Cope's lifelong work on the health and mental side of architecture is well known . . . " but gives no hint of its, no doubt, valuable nature, while her statement in the course of the interview that " I am certain I could not have done the work I have if I had not lived in a home which I built to be entirely in harmony with my temperament " is tantalizing in its subtle reticence.

*

But women are by no means alone in these critical and vital contributions to contemporary architectural theory and practice. Mr. Harvey Wiley Corbett, described by *The Evening Standard* as " the famous New York architect," has told the world that the home of the future will be regarded as " inclosed space."

*

The house that can be constructed from standard sections is described with the ardour of a Columbus talking of a new world. It is called the " take to pieces " home.

*

If a new architectural label can be invented that sounds like a stunt, it can be a nine-minutes' wonder in any popular paper. And to the public, all this is architecture.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, October 19

WORSHIPFUL COMPANY OF CARPENTERS. At the Carpenters' Hall, Throgmorton Avenue. " Slates and Roof Tiles." By F. L. Brady, M.SC., A.I.C. 7.30 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Hotel Metropole, Leeds. Opening General Meeting. Chairman's Address. By Martyn Noel Ridley, M.INST.C.E., M.I.STRUCT.E. 7 p.m.

HOUSING EXHIBITION. At the Kelvin Hall, Glasgow. Until October 28.

SOCIETY OF ANTIQUARIES. At Burlington House. " Original Drawings Relating to Sir Christopher Wren's Work in Westminster : the College, Houses of Parliament, Cotton House, the Abbey and Monastic Buildings." By A. T. Bolton. 8.30 p.m.

BEDFORD COLLEGE FOR WOMEN. At Regent's Park, N.W.1. " The Countryside and Country Planning." By Professor Patrick Abercrombie, M.A., F.R.I.B.A. 5.15 p.m.

Friday, October 20

INSTITUTION OF STRUCTURAL ENGINEERS. Scottish Branch. At 129, Bath Street, Glasgow. Chairman's address. By Professor Sir Thomas Hudson Beare. 7.30 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS. Western Counties Branch. At the Merchant Venturers' Technical College, Unity Street, Bristol. "Foundations." By G. B. R. Pimm. 7.15 p.m.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. At Winchester. President's Address. 6.15 p.m.

Saturday, October 21

Sunrise 6.33 a.m. Sunset 4.55 p.m.

EXHIBITION OF DESIGNS BY STUDENTS OF SCHOOLS OF ARCHITECTURE RECOGNISED FOR EXEMPTION FROM THE R.I.B.A. FINAL EXAMINATION. At the R.I.B.A. Galleries, 9 Conduit Street, W.1. Between 10 a.m. and 8 p.m. Saturdays 10 a.m. and 5 p.m. Closing day.

NEWS

●

POINTS FROM THIS ISSUE

Almost all factories built more than ten or twelve years ago are now obsolete *469*

. . . the duty of every loyal member of the R.I.B.A. to submit his application for registration without delay . *474*

. . . . to think well before they compromise their chartered status by entering their names on the Register *478*

No such thing as a contemporary British architecture *479*

The electrolytic method of producing the green patina on copper *486*

●

BRISTOL CATHEDRAL

The Bristol Cathedral Restoration Committee, appointed in March, 1931, in their final report say that a sum of £21,243 has been received, which ensures the safety of the Norman gateway and of the fabric of the cathedral. A permanent body has been formed, the Friends of the Cathedral, to look after future needs.

EDINBURGH CANAL BASIN SITE

A scheme is under the consideration of a group of London and Edinburgh business men for the utilization of the Canal Basin site, Lothian Road, Edinburgh. Three schemes were prepared; and the plan preferred, the estimated cost of which is about £400,000 includes on the site a large hotel, garage, shops, bus station and cinema. The site area is approximately 1¾ acres. Plans for the suggested scheme were prepared by Mr. John F. Matthew, F.R.I.B.A., of Lorimer and Matthew, architects, Edinburgh.

WEMBLEY

Work is to be begun immediately, and continue day and night to be ready for the 1934 season on a £150,000 Empire swimming pool and sports arena at Wembley. This has been designed by Sir Evan Owen Williams, consulting engineer for the original Wembley Exhibition. The swimming pool is to be the largest in the kingdom, with seating accommodation for 12,000. In winter the water will be frozen for ice hockey.

CAN IMPROVEMENT CONTINUE?

The improvement in the position of the building and allied industries during the present year has not resulted from any material government assistance or stimulus. This is clearly seen on the public works side of the industry which is most affected by government decisions and where there are 124,000 unemployed —50 per cent. more than in 1931. This is one of the few industrial groups in the Ministry of Labour classification with more unemployed than a year ago.

The need for an expansion of public works is, in the national interest, as great as ever. In spite of increasing home and foreign trade, bank deposits have only declined by £5,000,000 from a total of £1,983,000,000 since December. and are still £93,000,000 above their level of a year ago. This clearly indicates that the improvement of trade which is becoming apparent is not yet affecting the fundamentals of our economic position. Until frozen deposits are liquidated and the circulation of money increased and rendered more rapid there must remain a doubt whether improvement can continue. The most rapid and appropriate method of ensuring its continuance is by initiating at the earliest opportunity an expansionist public works policy. Now that the conversion operations are over and British credit stands high, that credit should be used for British development.

This is one of the objects of the Special Committee for Public Relations.

Subscriptions to the funds of the Committee should be made payable to the Hon. Treasurer, and should be addressed to 5, Duke Street, Adelphi, W.C.2.

BLACKPOOL DEVELOPMENT

A scheme has been prepared by Messrs. Massey and Boot, architects, of Blackpool, for re-modelling one of the important areas in the centre of the town at a cost of over £2,000,000. The putting into operation of the scheme would mean that the Municipal buildings, Town Hall, Market, North Railway station, Parish Church, General Post Office and Hippodrome would all be in one compact area. Blackpool Corporation may also operate their aerodrome as a municipal undertaking, and have decided to start proceedings to determine the lease of the airport, which has several years to run and is at present held by National Flying services.

EXHIBITION OF FEUDAL ART IN SOVIET RUSSIA

An art exhibition showing the masterpieces produced during the Feudal Ages in Russia (from the fifteenth to the eighteenth centuries) is being held in Leningrad. The exhibition comprises the best productions in painting, sculpture, frescoes and ikons, as well as other forms of art characteristic of the Feudal Age.

£45,000 BATHS SCHEME

The Baths Committee of the Belfast Corporation has appointed Mr. R. M. Henry as architect for the Peter's Hill Baths reconstruction scheme. Originally it was proposed to promote a competition for architects, but this was outvoted as impracticable. Mr. Henry's design for the reconstruction scheme has now been approved. The work will cost £45,000.

BIRMINGHAM ARCHITECTURAL ASSOCIATION

The election of officers and council of the Birmingham Architectural Association for the session 1933-1934 is announced as follows :—

President : W. T. Benslyn. Vice-Presidents : A. C. Bunch and A. Hale. Hon. Secretaries : S. J. Stainton and A. S. Edwards.Hon. Treasurer : C. S. Madeley. Hon. Librarian : R. F. Jordan.

Members of Council : Fellows : Bateman, C. E., Bewlay, E. C., Butler, A. T., Cooke, S. N., Goldsborough, F., Harvey, W. A., Martin, C. F., Simister, H. W., Hobbiss, H. W., and Swan, J.A.

Associates : Fillmore, C. E. M., Folkes, J. H., Jackson, H., Jenson, A. G., and Madeley, R. G.

The President's Address

Mr. William J. Benslyn, A.R.C.A., F.R.I.P.A., the new president of the Birmingham and Five Counties Architectural Association, gave his inaugural address on October 6. He began by paying a tribute to his predecessor, Mr. John B. Surman, and expressed the opinion that one of the main reasons the Association had been able continually to increase the scope of its work was that, whilst not neglecting the claims of its younger members, it had been able to preserve the interest and benefit by the advice of its past-Presidents and older members, whose influence was not confined to their own province, but who took a very large share in the activities of the R.I.B.A. as a whole.

There was a most important point, the President said, directly arising out of the Association's connection with the Royal

Institute: the Architects' Registration Act 1931.

He emphasized that it was the plain duty of every loyal member of the R.I.B.A. and of its allied societies, to submit his application for registration without delay. He also mentioned another point on which he had written to each member of the Association almost immediately after his election as President; namely, the formation of the body calling itself the Institute of Registered Architects, and expressed his confidence that he was voicing the views of every member present in congratulating Sir Giles Gilbert Scott on the excellent and prompt action he took in that matter. It was obviously a moment in the history of the profession when a really strong lead was necessary.

Leaving the subject of the Royal Institute, he then turned to the discussion of the activities of his own province.

"During last session we have, as you observe," he said, "altered our title to one which more accurately describes the geographical area covered by our activities. At the same time that this alteration was carried out, the rules of the Association were revised and a Student Class of members formed. These were passed by a special general meeting of the Association, and have since received the approval of the R.I.B.A."

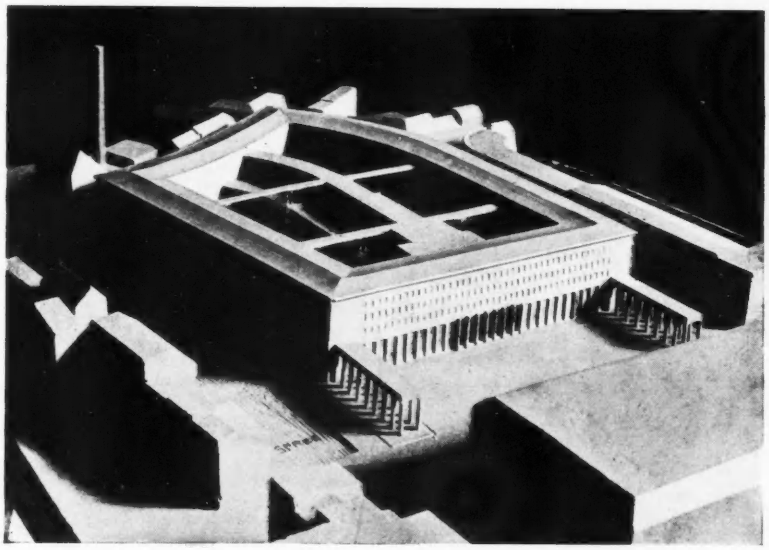
He mentioned the work of the County Associations for the Preservation of Rural England and the setting up of a Town Planning Committee to deal with questions arising under the Town and Country Planning Act 1932. The question of panels to work in collaboration with the planning authorities under Section 12 (1) of the Town and Country Planning Act had, he said, received careful attention, and in accordance with a resolution of the Warwickshire County Council, the work of forming in conjunction with the C.P.R.E. a number of panels in that county, was in progress.

Other subjects he dealt with were unemployment and the indebtedness of the Association to all those who contributed so regularly and so munificently to the Unemployment Fund; the list of papers for the coming session, and the contribution of the Association to architectural education.

It would be his aim, he said, during his term of office as far as possible to convince the public of the value and necessity of employing in all building activities, properly trained and qualified architects.

The division of buildings into classes, in some of which it is thought necessary to have architectural dignity, and in some of which it is not, was fortunately, he said, not so prevalent today as it was 20 years ago. There was scarcely a building of any class today, to the success of which a well-trained architectural mind could not contribute something of value.

The increasing scientific knowledge available to all had resulted, he concluded, in a more scientific outlook to life and thus towards architecture. The more frank appreciation of structural forms year by year was causing a freshness of treatment and a greater sense of reality and adaptation to purpose in our architecture, and this was most evident and appropriate in those buildings which had no definite tradition behind them. In architecture, as in all other matters, judgment, tradition and good taste must always play their part, but to condemn anything as bad because it is new, was just as foolish as to praise anything bad because it is old.



The new Reichsbank building in Berlin, on which work is now starting. A photograph of the architect's model.

SLUM CLEARANCE

Sir Hilton Young (Minister of Health) is to speak on "Slum Clearance" at the national conference of local authorities, organised by the National Housing and Town Planning Council, at Malvern on Saturday, November 25.

THE LONDON OVERFLOW INTO ESSEX

A recent article in the *Manchester Guardian Weekly* discusses the concern that ratepayers in Essex are feeling at the steady flow of Londoners into their county. A meeting is shortly to be held in the House of Commons, the article states, at which it is expected that the Members of Parliament for Essex will consult with representatives of the Essex County Council and of the London County Council. A movement is being organized by the South Essex Federation of Ratepayers' Associations to press for legislation whereby London's ratepayers shall contribute to the education and health services provided for former London residents who have moved into the L.C.C. estates at Becontree and Dagenham, in Essex.

The acuteness of the question is emphasized by a reminder that in the autumn a start will be made on the programme o the displacing and rehousing, under the slum clearance plan, of a quarter of a million people.

DR. BRADFIELD

Dr. J. J. C. Bradfield, a well-known Australian engineer, has retired after forty-two years' public service in the State of New South Wales. He was responsible for the design of Sydney Harbour bridge.

SIR RAYMOND UNWIN IN DUBLIN

Sir Raymond Unwin, PP.R.I.B.A., recently addressed the Royal Institute of the Architects of Ireland on "Planning Towns for Modern Life," at the Mansion House, Dublin. Sir Raymond urged the cultivation of a town-planning consciousness by every class of town dweller, and suggested that on the adequate development of such a consciousness depended the twentieth century's hope of the attainment of beauty in city, town and village.

Alluding to the scope modern conditions provided for better town planning, Sir Raymond confessed that never could he understand why in England millions of money were being dispensed as unemployment benefit when they could be profitably expended in employing the recipients in house building.

Mr. G. F. Beckett, President of the Institute, presided, and a vote of thanks to Sir Raymond was proposed by the Lord Mayor of Dublin (Alderman A. Byrne, T.D.).

R. I. B. A.

THE PANEL SYSTEM

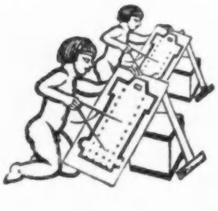
A sub-committee has been meeting this month at the R.I.B.A. to consider the question of the most efficient working of the panel system, the object of which is provide designs for small houses at low-scale fees, and to help builders and others to have architectural guidance. The following are members of the sub-committee: Mr. Basil Oliver, F.R.I.B.A. (C.P.R.E.), Mr. Peyman, F.I.O.B. (builder), Mr. A. L. Roberts, F.R.I.B.A. (County Architect, Hants), Mr. S. Ramsey, F.R.I.B.A. (R.I.B.A.), and Mr. G. H. Jack, F.R.I.B.A. (Panels Secretary).

INTERMEDIATE EXAMINATION

The following are the dates on which the orthcoming R.I.B.A. Intermediate Examiation will be held :—

November 17, 18, 20, 21, and 23, 1933.

COMPETITION



NEWS

HORNSEY TOWN HALL

The award of the assessor, Mr. C. Cowles-Voysey, F.R.I.B.A., in the above competition was announced last week as follows :

First Premium (£350), Mr. R. H. Uren, A.R.I.B.A., 67 Fleet Road, Hampstead, N.W.3.

Second Premium (£250), Messrs. John Grey and D. F. Martin-Smith, F. and A.R.I.B.A., 45 Bloomsbury Square, W.C.1.

Third Premium (£150), Messrs. C. H. James and S. Rowland Pierce, F. and A.R.I.B.A., 33 Bedford Place, W.C.1.

The following alternative design was highly commended: Messrs. John Grey and D. F. Martin-Smith, F. and A.R.I.B.A. 45, Bloomsbury Square, W.C.1.

The assessor in his report, said :

"Two hundred and eighteen designs were submitted comprising three main types of lay-out: (1) Assembly hall and offices placed side by side; (2) Assembly hall in centre surrounded by offices; (3) Assembly hall as separate building behind offices.

Owing to the irregular shape of the site surrounded by properties over which no rights of light exist, the problem of securing permanent light and prospect becomes of first importance in determining the right layout. A large number of the schemes have failed to secure this.

The correct solution appears to be to turn inwards and secure light from the site rather than overlook the adjoining properties.

The nature of the site and its relation to the Broadway make a monumental scheme impossible.

The Winning Design:

1 : This design admirably fits the site.

2 : It is well lighted independently of the adjoining properties.

3 : The assembly hall is well separated from the offices, but there is convenient and very "architectural" connection between the two.

4 : The assembly hall and the council chamber are well protected from traffic noise.

5 : The offices are compact. The length of office corridor is approximately one-half that in any of the other design receiving final consideration. These and other factors produce an economical building to maintain.

6 : The council chamber, committee rooms and members' rooms are self-contained and would be free from disturbance by the public or the staff. There is a separate stair to the public gallery of the council chamber entirely cut off from other parts of the building. The caretaker is provided with a flat in a wing having its only staircase approach from outside.

7 : The front elevation has dignity and definite civic character. It is cleverly designed to make the best of the difficult shape of the forecourt and would have an interesting view from the Broadway.

8 : A quantity surveyor has scrutinized the rates allowed for the various parts of the building, and is satisfied that the building can be properly erected within the amount stated in the Conditions."

The 218 designs submitted are now on view at the Alexandra Palace.

Illustrations of the three premiated designs and a review by *Iodos* of the results are given on pages 479-485 of this issue.

A.A. COMPETITION

We understand that the result of the competition for suburban houses instituted by the Architectural Association will be announced on Friday, October 20. The assessor's award in that case will be given in our next issue.

LAY-OUT OF BUILDING ESTATE AT CARDIFF

A new competition is announced for the above purpose; see *Competitions Open*.

FORTH PARK, KIRKCALDY : MATERNITY HOME

The Corporation of the Royal Burgh of Kirkcaldy are promoting a small limited competition for an addition to the Forth Park Maternity Home. Mr. John Begg, F.R.I.B.A., has been appointed as Assessor.

Competitions Open

December 4.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor: Thomas S. Tait, F.R.I.B.A. Premiums: £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1. The conditions were reviewed in our issue for September 28.

December 15.—Sending-in Day. Messrs. Jenson and Nicholson invite designs for the decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.: and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1.

No date.—Mr. J. P. Turner, J.P., of Cardiff, invites architects and town planners to submit designs for the lay-out of a building estate of about seven acres at Penylan Hill, Cardiff. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £100, £50 and £25. Conditions, etc., obtainable from E. Turner and Sons, Ltd. Penarth Road, Cardiff. Deposit £1 1s.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Proposed Extensions to the Town Hall, Swindon. Assessor: Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere A.R.I.B.A.

Proposed Town Hall and Municipal Buildings, Stoke Newington. Assessor: Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

THIS ARSHETECTURE

A suggestion that an architect should be appointed to act in an advisory capacity in connection with the town's proposed slum clearance scheme met with considerable opposition at last night's meeting of the Spennymoor Urban Council.

Ultimately it was decided to confirm the recommendation, which was put forward by a sub-committee, with a proviso that no steps should be taken in this direction until the District Valuer's report on the proposed Green Lane site was received.

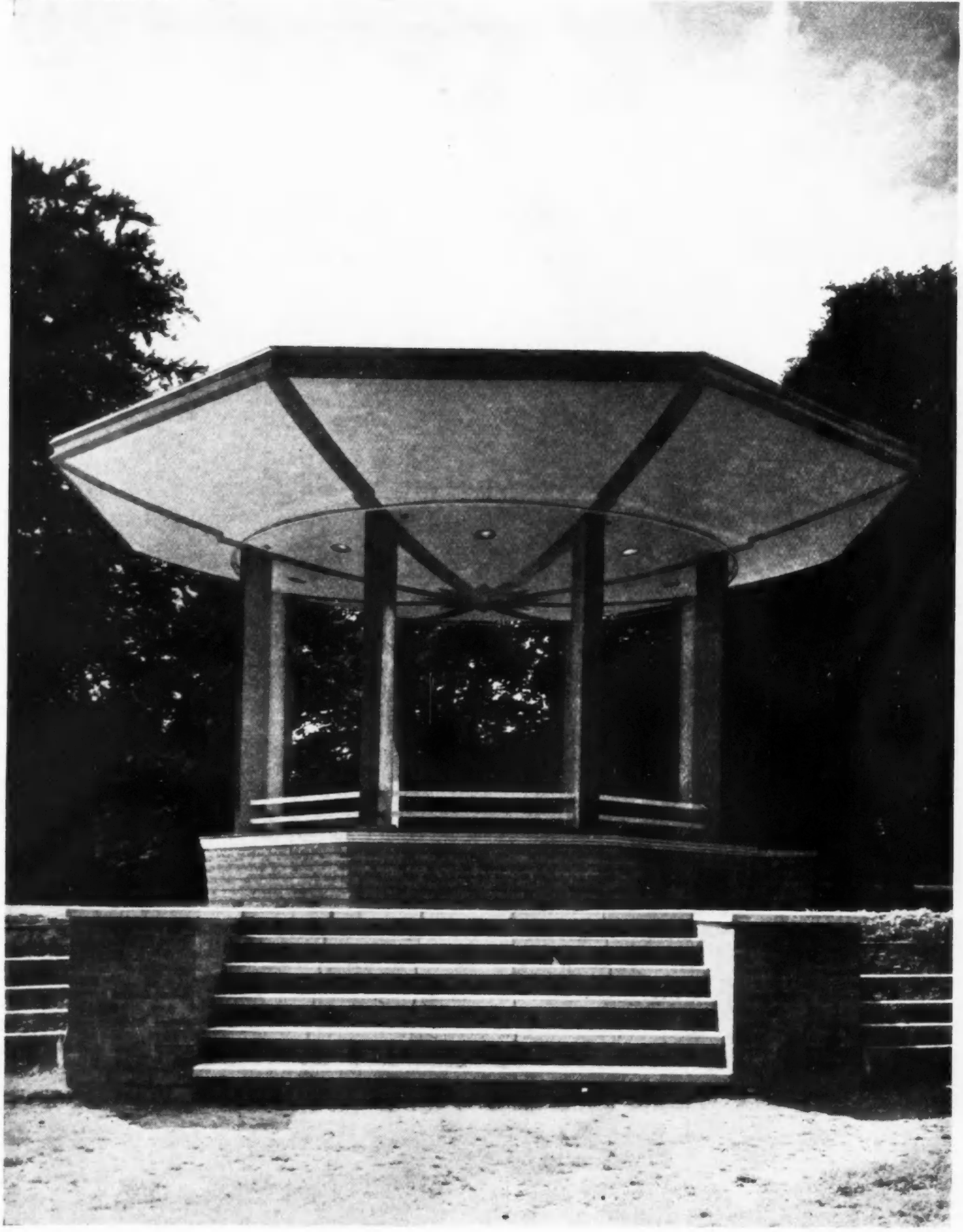
Mr. F. E. Hamilton opposed the recommendation on the ground that the appointment was premature until the whole scheme had been approved by the Ministry of Health. There was a probability that the Council would be faced with considerable architect's fees, even though the scheme did not go through.

Mr. H. Askew, chairman of the committee, explained that in view of the recent correspondence from the Ministry and the great amount of detailed information which was required it was imperative that the Council should have the advice of an expert in order to expedite the schemes.

Mr. J. Reavley moved that the recommendation should be referred back. He asked whether their surveyor was not capable of supplying the information required by the Ministry.

From The Northern Echo.

BANDSTAND AT STOURBRIDGE



This bandstand is in Stevens Park, Wollescote, Stourbridge, which has recently been laid out by the same architects as a public park. It was designed on an acoustical basis in consultation with Mr. Hope Bagenal.

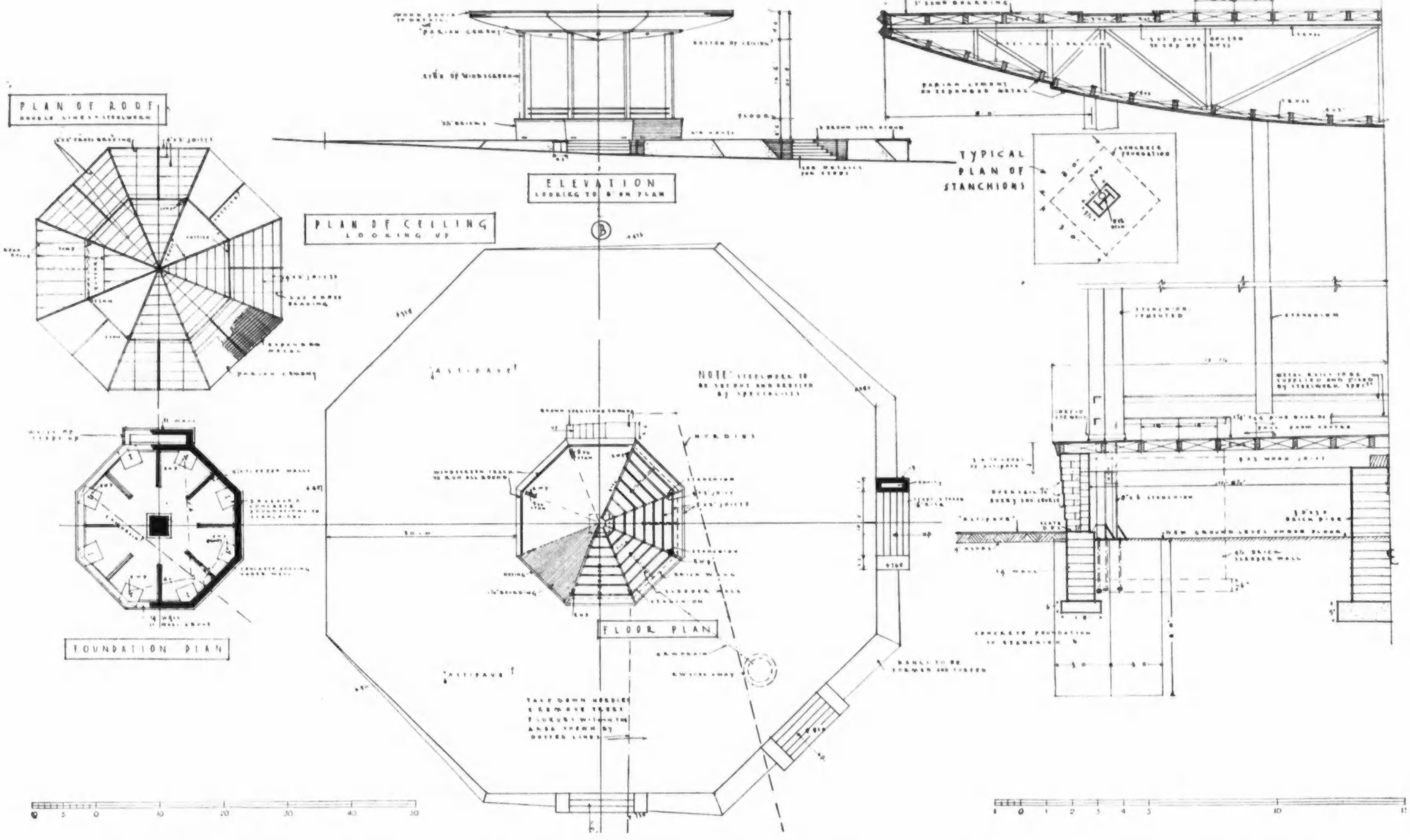
The skeleton of the roof is of steel, and the ceiling joists are all braced and wedged up tight to make a resonant sound reflector.

The base is composed of two and a half inch local rustic bricks, soft brown-red in colour, every second course set to overhang half an inch. The floor is of pitch-pine carried on red deal wood joists, also wedged up tight to form a resonator and having a fall of 3 ins. from the centre to the sides.

Artificial lighting is by means of eight circular glass panels in the ceiling, each with a 150 watt bulb behind. Provision has been made for sliding wind-screens which may be fixed at some future time, and a jointless paved area 30 ft. wide and octagonal in shape has been laid down round the bandstand for open-air dancing. The total cost was a little under one thousand pounds.

DESIGNED BY FOLKES AND FOLKES

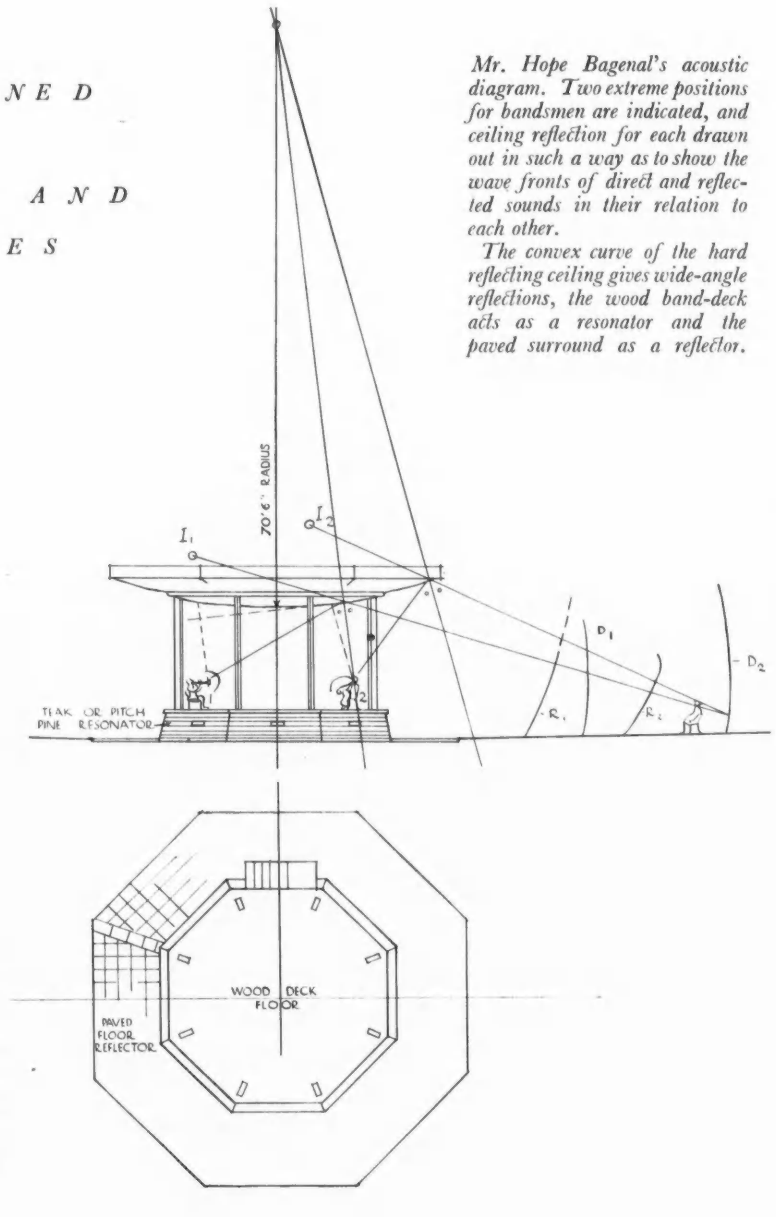
BANDSTAND AT STOURBRIDGE, WORCESTERSHIRE


PLAN OF ROOF
DOUBLE LINES = STEELWORK
PLAN OF CEILING
LOOKING UP
ELEVATION
LOOKING TO B ON PLAN
TYPICAL PLAN OF STANCHIONS
FOUNDATION PLAN
FLOOR PLAN
NOTE: STEELWORK TO BE SET OUT AND ERECTED BY SPECIALISTS
HURDLES
STANCHION
BRICK WALL
SLEEPER WALL
0 5 0 10 20 30 40 50
0 1 2 3 4 5 10 15

Plans and elevation of the bandstand with, on the right, a ***detail*** *section through the roof and band-deck.*

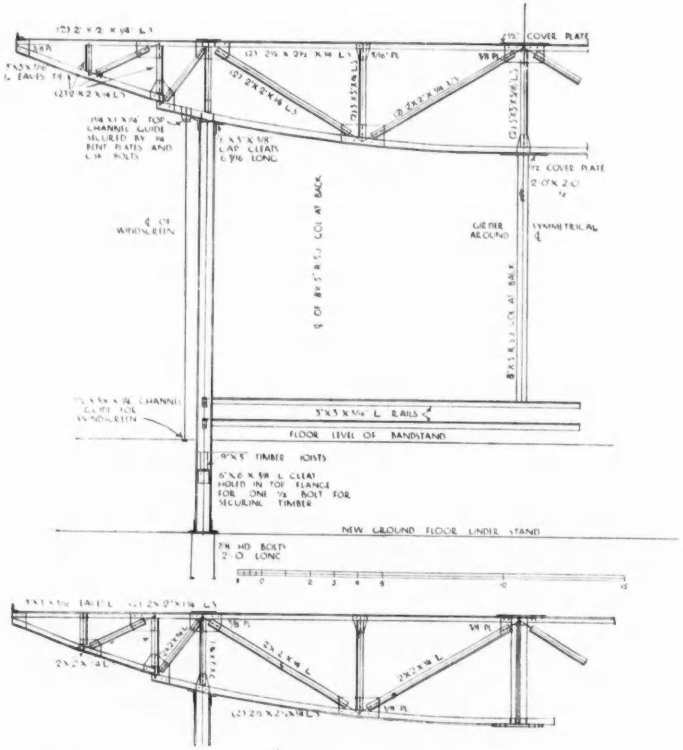
The steel trusses (see steelwork details below) ***are supported on steel columns*** *with concrete bases. The roof is flat and covered with lead, with a sunk gutter all round, from which rain-water pipes are carried down the inside of the columns. The columns and ceiling are cased with expanded metal and plastered.*

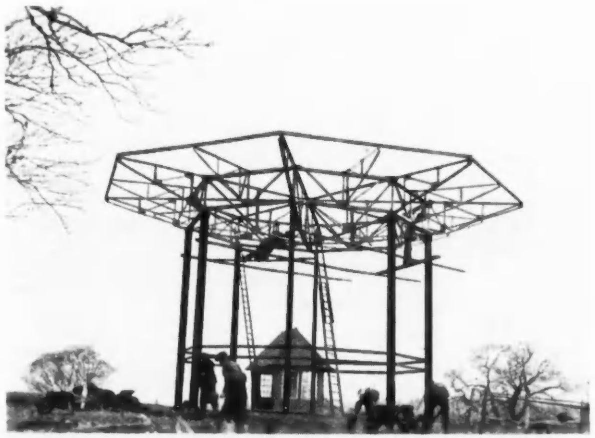
DESIGNED BY FOLKES AND FOLKES


70'6" RADIUS
I_1
I_2
1
2
D_1
D_2
R_1
R_2
TEAK OR PITCH PINE RESONATOR
WOOD DECK FLOOR
PAVED FLOOR REFLECTOR

Mr. Hope Bagenal's acoustic diagram. Two extreme positions for bandsmen are indicated, and ceiling reflection for each drawn out in such a way as to show the wave fronts of direct and reflected sounds in their relation to each other.

The convex curve of the hard reflecting ceiling gives wide-angle reflections, the wood band-deck acts as a resonator and the paved surround as a reflector.


(2) 2" × 2" × 1/4" L's
3/8 PL
(2) 2½ × 2½ × 1/4 L's
5/16" PL
½" COVER PLATE
3/8 PL
(2) 2"×2"×1/4 L's
(2) 2"×2"×1/4 L's
EAVES TIE
(2) 2 × 2 × 1/4 L's
1¼ × 1 × ¼" TOP CHANNEL GUIDE SECURED BY ¼ BENT PLATES AND CSK BOLTS
6 × 5" × 3/8" CAP CLEATS 0'9/16 LONG
½ COVER PLATE 2'0"× 2'0"
℄ OF WINDSCREEN
℄ OF 8"× 5" R.S.J. COL AT BACK
GIRDER AROUND
SYMMETRICAL ℄
8"× 5" R.S.J. COL AT BACK
CHANNEL GUIDE FOR WINDSCREEN
3"× 3" × 5/16" L RAILS
FLOOR LEVEL OF BANDSTAND
9"× 3" TIMBER JOISTS
6"× 6" × 3/8" L CLEAT HOLED IN TOP FLANGE FOR ONE ½ BOLT FOR SECURING TIMBER
NEW GROUND FLOOR UNDER STAND
7/8 HD BOLTS 2'-0" LONG
0
2
3
4
5
10
15
EAVES L
(2) 2"×2"×1/4 L's
3/8 PL
2"×2"×1/4 L
2"×2"×1/4 L
2"×2"×1/4 L
2"×2"×1/4 L
1/4 PL
1/4 PL
(2) 2½ × 2½ × 1/4 L's



Left: details of the steelwork which forms the structural framework of the bandstand. The upper diagram shows the main lattice girder which runs diametrically across the whole roof. The girder below is one of the six half-trusses which radiate from the centre. Beneath it is a photograph taken during construction showing the steelwork in position.

LETTERS *FROM* READERS

HOWARD D. SUGDEN, A.R.I.B.A.

G. C. LAWRENCE, F.R.I.B.A.

R. S. REDWOOD,
(Hon. Secretary, the Bristol Society of Architects)

A. SEYMOUR REEVES,
(Secretary of the Association of Architects' Surveyors and Technical Assistants)

Registration

SIR,—The concluding remarks in your leading article are apt and to the point, and many members of the R.I.B.A. would like an answer to them.

The R.I.B.A., by promoting the Registration Act, has created a body superior to itself. The majority of members of the Institute became attached only to obtain a recognized qualification. State registration, in the eyes of the public, will now take precedence, and the country members in particular will have little further use for the R.I.B.A.

The Institute will in a short time revert to its original position of a learned but small association of London architects. In the meantime the Council rebuilds its headquarters without having the money to do so, and commits itself to a large increase of annual expenditure on a quickly shrinking income and members are collectively and individually liable for the debts of the Institute should it become insolvent.

HOWARD D. SUGDEN

SIR,—Surely would-be propaganda by apologists for the Registration Act touches bottom in the contribution of a "Chartered and Registered" architect, in your issue for October 12. The writer's appeal is directed to panic registration by all to whom the passing of a qualifying examination presents itself as a bar, and his ludicrous suggestion is that a *voluntary* roll, comprising these persons in bulk, will presently be paraded in the Courts to the disparagement and discomfiture of unregistered qualified practioners, whether "unattached" or "chartered."

Your correspondent, it seems, has seen fit to equip himself with double harness—belt and braces. In 1896 I was invested with an A.R.I.B.A. belt of standard pattern. I shall never cumber myself with the fancy braces of this Act, and if, in the pride of those braces, he will put his name to a published statement that without them I possess no legally recognized professional status as a qualified architect I will give him immediate opportunity, not for the further exercise of his imagination, but for hearing my examination, cross-examination and re-examination on the subject of my qualifications during legal proceedings, at which he will appear as defendant. As an alternative, he might be able to persuade the "statutory" head of the profession, the Chairman of the Registration Council, to join me in an application to the Privy Council (which, oddly, regulates both Charter and Register) for a ruling as to the legal status of a Chartered Architect.

G. C. LAWRENCE

SIR,—Your correspondent's article entitled *The Necessity of Registration* would appear to be a carefully calculated attempt to coerce into Registering those who have not considered it necessary to do so.

The article is, however, so misleading as to warrant a reply on behalf of those whose views do not accord with those of "Chartered and Registered Architect." One finds it difficult to understand why he thus designates himself, since in the course of his article he proceeds to deride the Charter by implying that the only qualifying status for architects is that of registration. If this is so, one would have thought it expedient for him to relinquish his chartered status on payment of the statutory six shillings and eight pence.

We should then have, in place of the hypothetical court scene depicted for us, something as follows :—

Cross-examining K.C.: "Well, Mr. Brown, you claim to be an expert in this matter. You are an architect?"

"Yes. I am a Registered Architect."

"In other words, you are a qualified architect."

"Yes."

"The firm of Buggins, plumbers, undertakers and estate developers, are known to you?"

"I have heard of them."

"Would you consider them qualified to appear as expert witnesses in this case?"

"Of course not, they are not architects."

"I have here a copy of the Statutory Register. Their name appears therein, so presumably they are qualified architects, as you claim to be."

"Ah, probably they employ a registered architect."

"That may be so, but according to the Act they are Registered Architects, so presumably they have the same status as you. Do you agree?"

"No, certainly not."

"Now, sir, don't prevaricate. You have told us that you are a qualified Registered Architect, and yet you deny the qualified status to Messrs. Buggins, who are also Registered Architects. What are we to believe?"

Confusion of witness, who would wish he had never bartered his birthright for the Registration mess of pottage.

The facts are that Parliament has refused to protect the title of "Architect," and anyone may continue to make use of that title. The Registration Act simply grants permission to the Statutory Council to set up a voluntary Register, which confers no status whatever except to commercial bodies who carry on architctural business, and those "architects" whose inabilities prevent them entering the profession by the usual channels.

It is incumbent on the 2,000 members of the R.I.B.A. who have not yet registered to think well before they compromise their chartered status by entering their names on the Register. We are assured by the Registration Council that an Amending Act Committee has been set up, and when this has drafted an Amending Bill satisfactory to Parliament and the profession generally, those who prefer a status conferred on the R.I.B.A. by four successive Sovereigns may consider it advisable to Register.

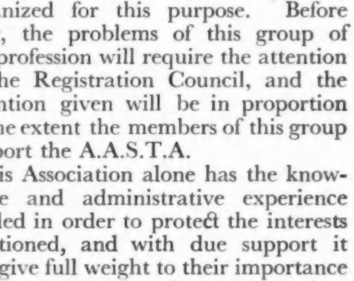
R. S. REDWOOD

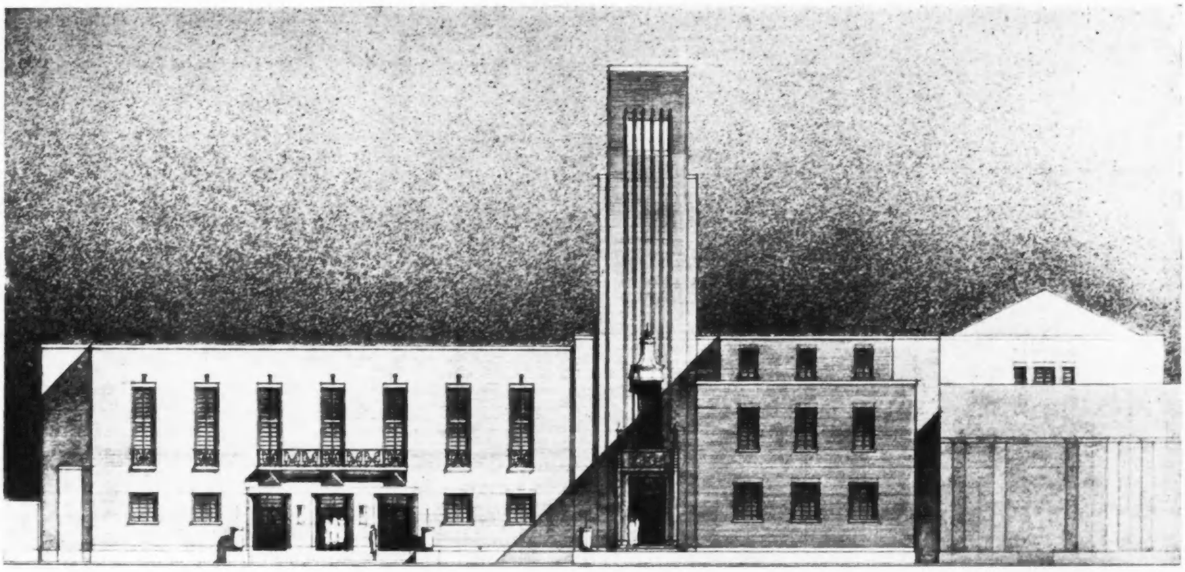
SIR,—With reference to the admirable article on Registration which appeared in your issue for October 12, I should like to call the attention of all salaried architects or assistants to the importance of becoming registered, and also to the importance of all architects in this category supporting the Association of Architects, Surveyors and Technical Assistants.

The A.A.S.T.A. is the mouthpiece for this group on the Registration Council, and is the only body specially organized for this purpose. Before long, the problems of this group of the profession will require the attention of the Registration Council, and the attention given will be in proportion to the extent the members of this group support the A.A.S.T.A.

This Association alone has the knowledge and administrative experience needed in order to protect the interests mentioned, and with due support it will give full weight to their importance in matters arising from registration. All architects employed on a salary basis should take the opportunity and secure their position as far as possible.

A. SEYMOUR REEVES





Elevation of winning design by R. H. Uren.

THE HORNSEY COMPETITION

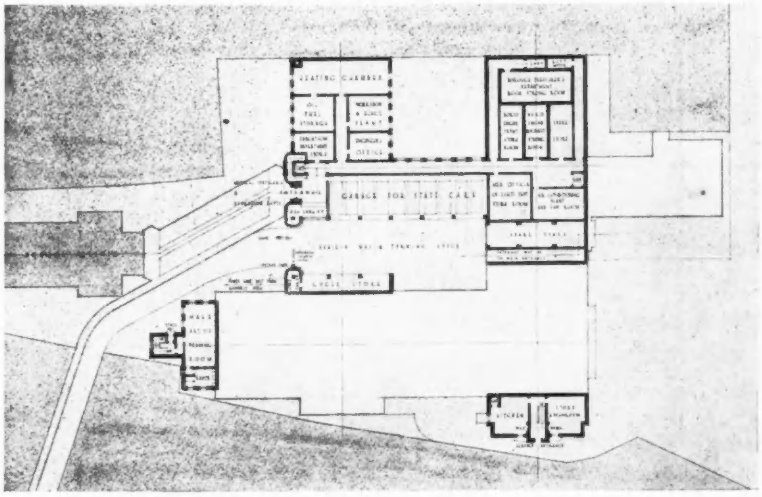
*The designs reviewed**

[by IODOS]

A VISIT to the Alexandra Palace, monstrous monument of Victorianism, to inspect the exhibition of 218 designs for the Hornsey Town Hall will well repay the analytical student of contemporary British architecture. He will get little comfort but should get considerable enlightenment from the expedition. For me the outstanding lesson was that, if these designs are at all typical, there is no such thing as a contemporary British architecture ; no hint whatever of any common tradition or way of thinking about planning or composition or style, and precious little indication that more than a small minority of competitors are using their brains as creative instruments at all. The lover of " the styles " will, it is true, find a feast of imitation and adaptation. Gothic revivalists, alas, have had an off-day ; but every subsequent European mode is represented. Here are all the classic styles—Wren, Georgian, Regency, Victorian, and their Continental counterparts—both with and without their cornices and roofs ; the Edwardian eccentric and the neo-Georgian cinema; up-to-date romance from Sweden and Holland, beaux-arts strains from Paris and touches of Cape-Dutch.

From this imitative ruck a handful of schemes stand out as having either some vitality of style or some vigour and efficiency of planning ; and from this handful Mr. Uren's design stands out again as having both style and planning—an easy winner.

The Premiated Designs.—As Mr. Cowles-Voysey points out in his assessor's notes, the basic planning problem was to provide a well-lighted building on a narrow confined site, and the basic elevational problem to provide a building which would look its part on a site without any effective monumental frontage. Mr. Uren lights every room that matters from the site itself and not from adjoining properties, fits in all the accommodation in suitable sequence and connection with admirable compactness, and at the same time is virtually the only competitor to place a really interesting three-dimensional composition in the narrow sidelong view from the Broadway. He is not afraid of either symmetry or asymmetry. He places the assembly hall and the offices side by side and makes no attempt to force them into any unnatural balance ; but at the same time he gets all the advantages that are to be reaped from the axial treatment of corridor connections. As a whole his elevations are simple and sensible without affectation, enough to make them shine in the average of their company ; but his tower, though



Lower ground floor plan of winning design.

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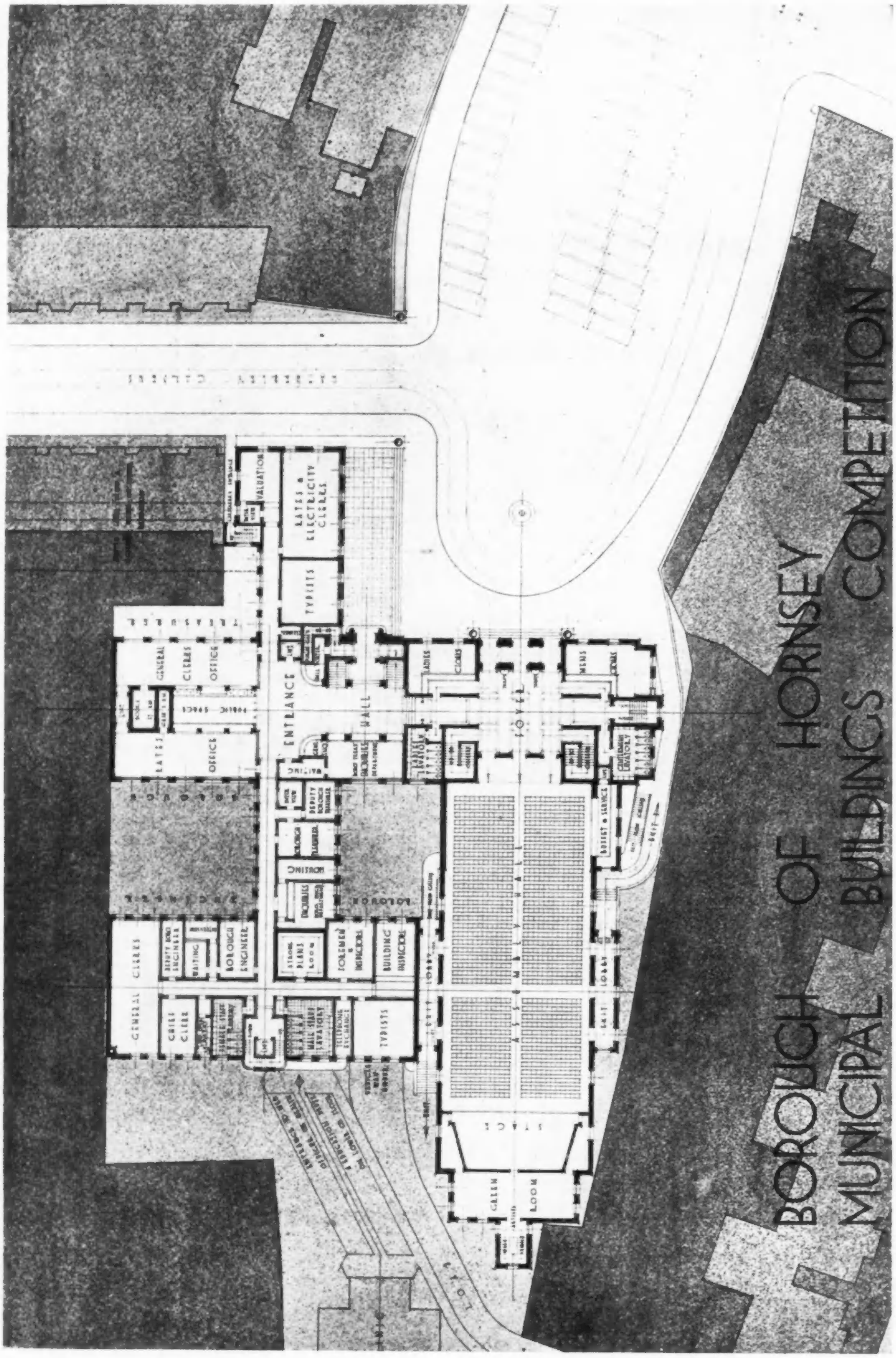
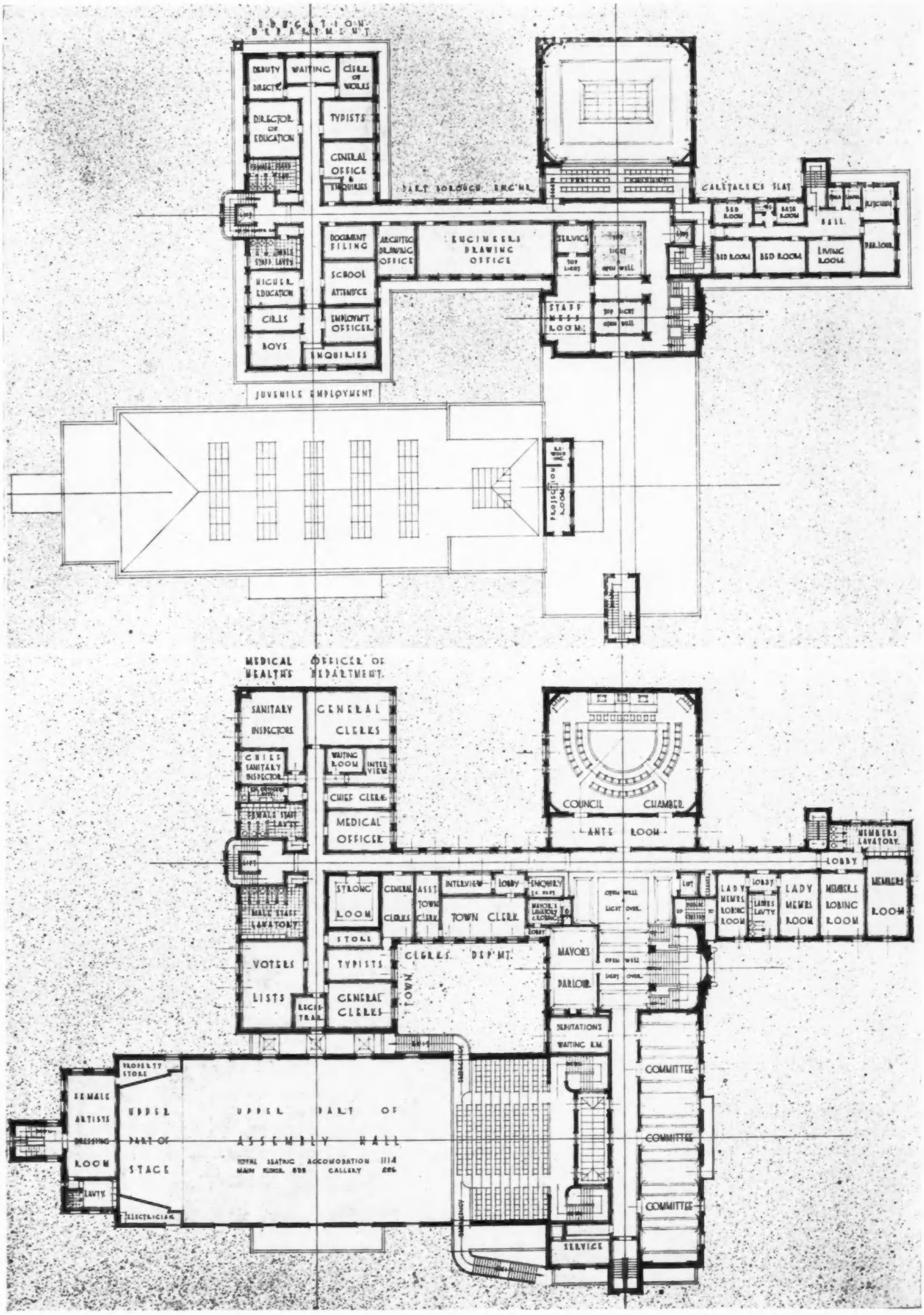
* The assessor's award and report are given under *Competition News* on page 474.

THE HORNSEY COMPETITION: WINNING


BOROUGH OF HORNSEY
MUNICIPAL BUILDINGS COMPETITION
VALUATION
RATES & ELECTRICITY CLERKS
TYPISTS
TREASURER
GENERAL CLERKS OFFICE
PUBLIC SPACE
RATES OFFICE
ENTRANCE HALL
WAITING
LADIES CLOAKS
MENS CLOAKS
FOYER
HOUSING
BOROUGH ENGINEER
WAITING
GENERAL CLERKS
CHIEF CLERK
STRONG PLANS ROOM
FOREMEN & INSPECTORS
BUILDING INSPECTORS
TYPISTS
BUFFET & SERVICE
ASSEMBLY HALL
STAGE
GREEN ROOM

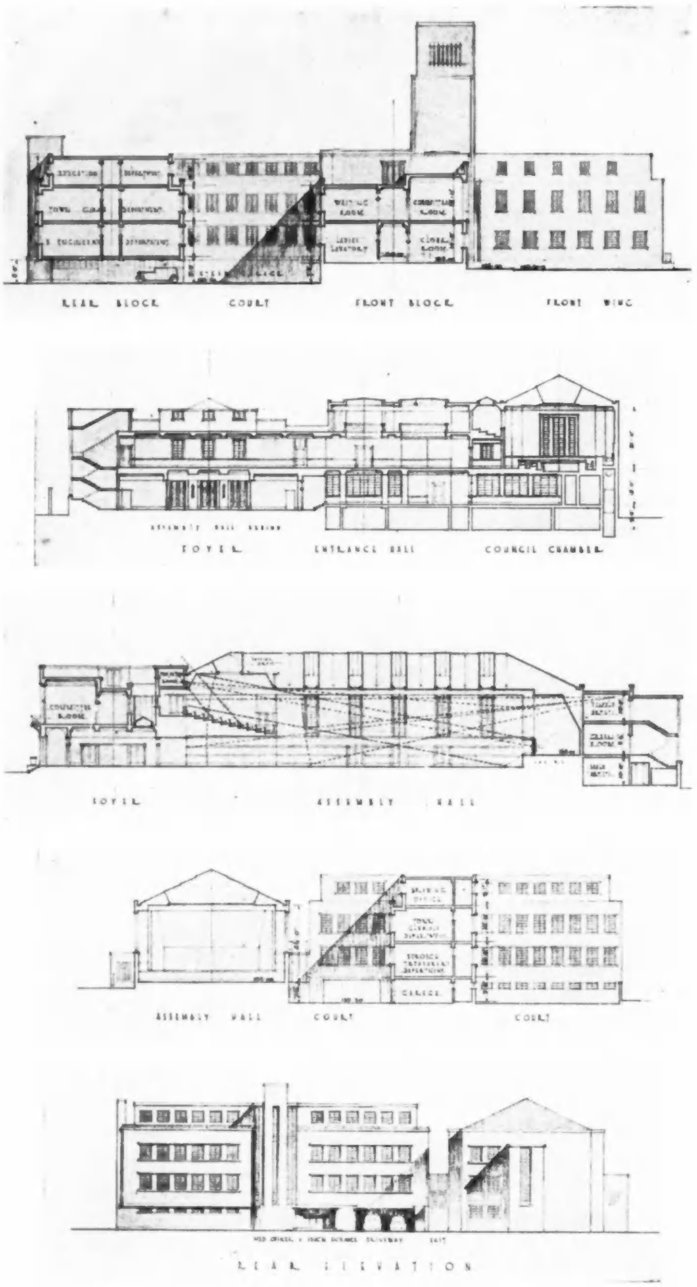
The ground floor plan

DESIGN: BY REGINALD H. UREN


EDUCATION DEPARTMENT
DEPUTY DIRECTR
WAITING
CLERK OF WORKS
DIRECTOR OF EDUCATION
TYPISTS
GENERAL OFFICE & ENQUIRIES
PART BOROUGH ENG'RS
CARETAKER'S FLAT
BED ROOM
BATH ROOM
KITCHEN
HALL
BED ROOM
BED ROOM
LIVING ROOM
PARLOUR
DOCUMENT FILING
ARCHITECTS DRAWING OFFICE
ENGINEERS DRAWING OFFICE
SERVICE
TOP LIGHT
TOP LIGHT OPEN WELL
MALE STAFF LAVTY
HIGHER EDUCATION
SCHOOL ATTEND'CE
GIRLS
EMPLOYM'T OFFICER
BOYS
ENQUIRIES
STAFF MESS ROOM
TOP LIGHT OPEN WELL
JUVENILE EMPLOYMENT
PROJECTION ROOM
MEDICAL OFFICER OF HEALTH'S DEPARTMENT
SANITARY INSPECTORS
GENERAL CLERKS
CHIEF SANITARY INSPECTOR
WAITING ROOM
INTERVIEW
CHIEF CLERK
FEMALE STAFF LAVTY
MEDICAL OFFICER
COUNCIL CHAMBER
ANTE ROOM
MEMBERS LAVATORY
LOBBY
LIFT
STRONG ROOM
GENERAL CLERKS
ASST TOWN CLERK
INTERVIEW
LOBBY
ENQUIRY
TOWN CLERK
MAYOR'S LAVATORY & CLOAKS
OPEN WELL LIGHT OVER
LIFT
CLEANERS
LADY MEMBS ROBING ROOM
LOBBY
LADIES LAVTY
LADY MEMBS ROOM
MEMBERS ROBING ROOM
MEMBERS ROOM
MALE STAFF LAVATORY
STORE
VOTERS LISTS
TYPISTS
TOWN CLERKS DEP'MT
MAYOR'S PARLOUR
OPEN WELL LIGHT OVER
REGISTRAR
GENERAL CLERKS
DEPUTATIONS WAITING RM
PROPERTY STORE
FEMALE ARTISTS DRESSING ROOM
LAVTY
UPPER PART OF STAGE
UPPER PART OF ASSEMBLY HALL
TOTAL SEATING ACCOMODATION 1114
MAIN FLOOR 888 GALLERY 226
ELECTRICIAN
COMMITTEE
COMMITTEE
COMMITTEE
SERVICE

The first (bottom) and second floor plans

THE HORNSEY COMPETITION



Rear elevation and sections of winning design by R. H. Uren.

very well judged in position and size, is rather fussed and over-detailed—a vertical mass does not need so much additional vertical emphasis. The only serious defect of the plan is that the assembly hall is unduly long and narrow.

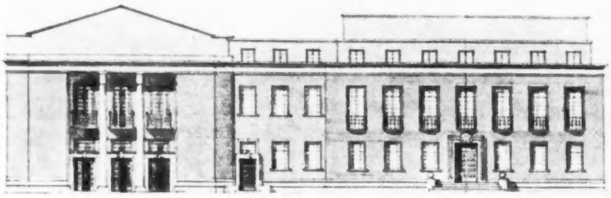
The second prize design (Messrs. Grey and Martin-Smith) has many of the same planning merits as the first. The assembly hall (also too long and narrow) and the offices are again side by side, but the offices are arranged all round a large light-court, instead of at either side of a spinal corridor. Corridor space is much greater and the whole less compact. The front elevation is dull and flat and fails to resolve the duality of hall and office Entrances.

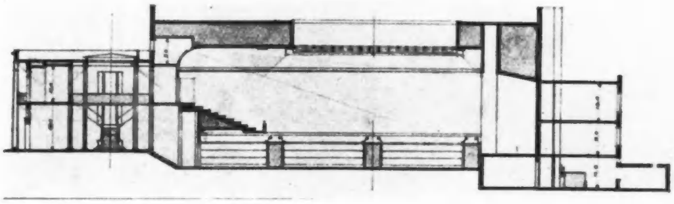
The third prize design (Messrs. James and Pierce) makes the space for a yet larger court by placing the assembly hall on the first floor right across the frontage, with a vast covered way approach to the office entrance beneath it. In this case a proportion of the rooms are not lighted from the court, but rely on unprotected light from adjoining property; corridor connections are again a very long way round. The main elevation achieves a rather ponderous unity, but looks a little dressed-up in too large a suit of clothes.

Some Other Schemes.—Time did not permit more than a very cursory examination of the two hundred or more other schemes. I probably passed over many with considerable planning merits in my instinctive search for elevations which had any interest at all. Messrs. Percy Thomas and Prestwich, Lanchester and Lodge, Bradshaw, Gass and Hope, and Berry Webber (the last with perhaps the best drawn set in the exhibition) all had sound schemes of the normal symmetrical "competition" type. But, in varying degree, all competitors who tried this solution suffered the penalties of putting new wine into old skins; the site did not fit the standardized plan. The less expert designs showed all manner of extraordinary contortions; the more expert only cloaked with ingenious "paper" patterns a general failure to give adequate protected daylight and a general delusion that a façade set back 150 feet on the skew could be assumed to be square set on a main road frontage.

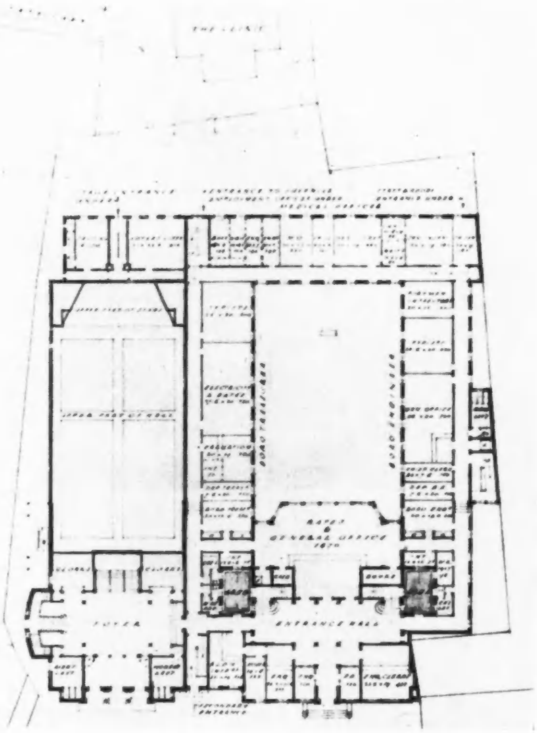
More interesting were the asymmetrical schemes of Messrs. Colcutt and Hamp (well drawn with a tall lanterned tower of Swedish character, but uncertainly lighted), Brace and Osborn (a pleasant Dutch-modernist treatment with a plan not unlike the winner's, but poorly presented), Stanley Hall, Easton and Robertson (a good if somewhat illegible plan but a disappointing elevation), and R. M. Thomas, who put his assembly hall at the back of the site and his offices in one long string at the north side, with a very horizontal-cum-vertical modern treatment. Full Corbusier modernism had its only representation in the design of Messrs. Stephenson, Holford and Adam (Liverpool). This was well lighted with immense lengths of corridor, the offices shaped like an aeroplane with the assembly hall as half a tail. True to its type, the scheme hadn't in the ordinary sense any elevation at all; this at least saved it from being let down by its elevation like so many of its neighbours, but its chances would have been better if more trouble had been taken to make the drawings more complete and intelligible.

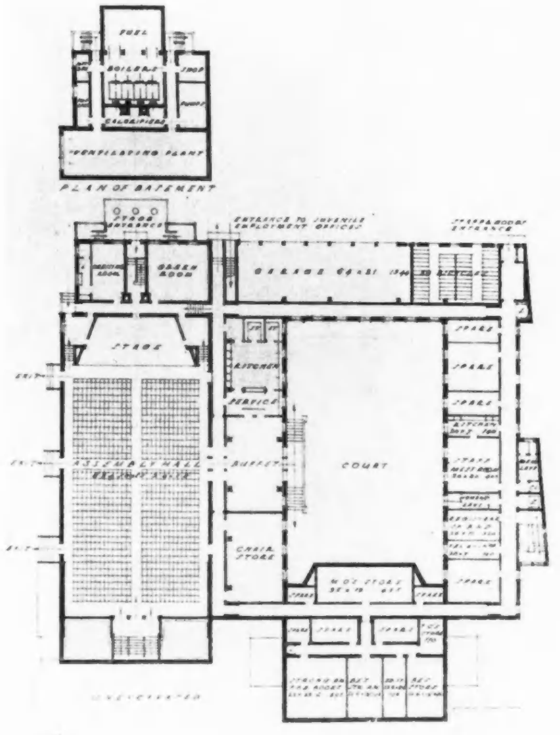
DESIGN PLACED SECOND

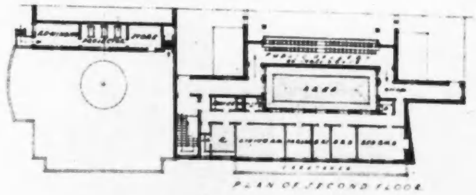


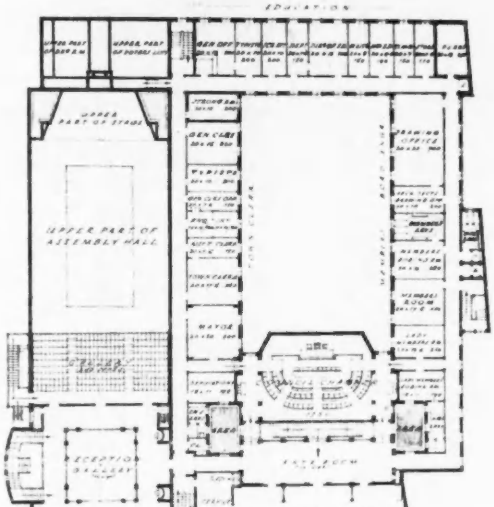


Above: principal elevation and longitudinal section through assembly hall; right: ground floor plan; below: left, lower ground floor, and right, first floor plans.


FOYER
ENTRANCE HALL
RATES & GENERAL OFFICE

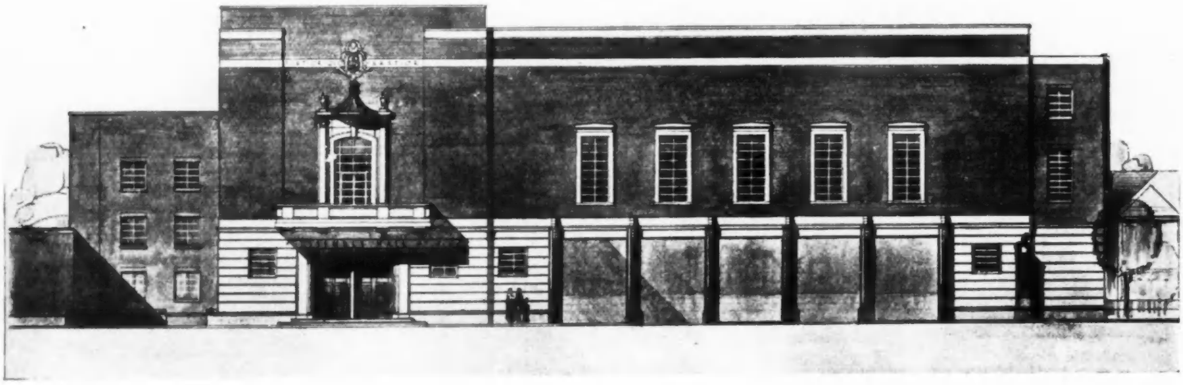

FUEL
BOILERS
CALORIFIERS
VENTILATING PLANT
PLAN OF BASEMENT
ENTRANCE TO JUVENILE EMPLOYMENT OFFICES
GREEN ROOM
GARAGE
STAGE
KITCHEN
SERVICE
BUFFET
ASSEMBLY HALL
CHAIR STORE
COURT
UNEXCAVATED

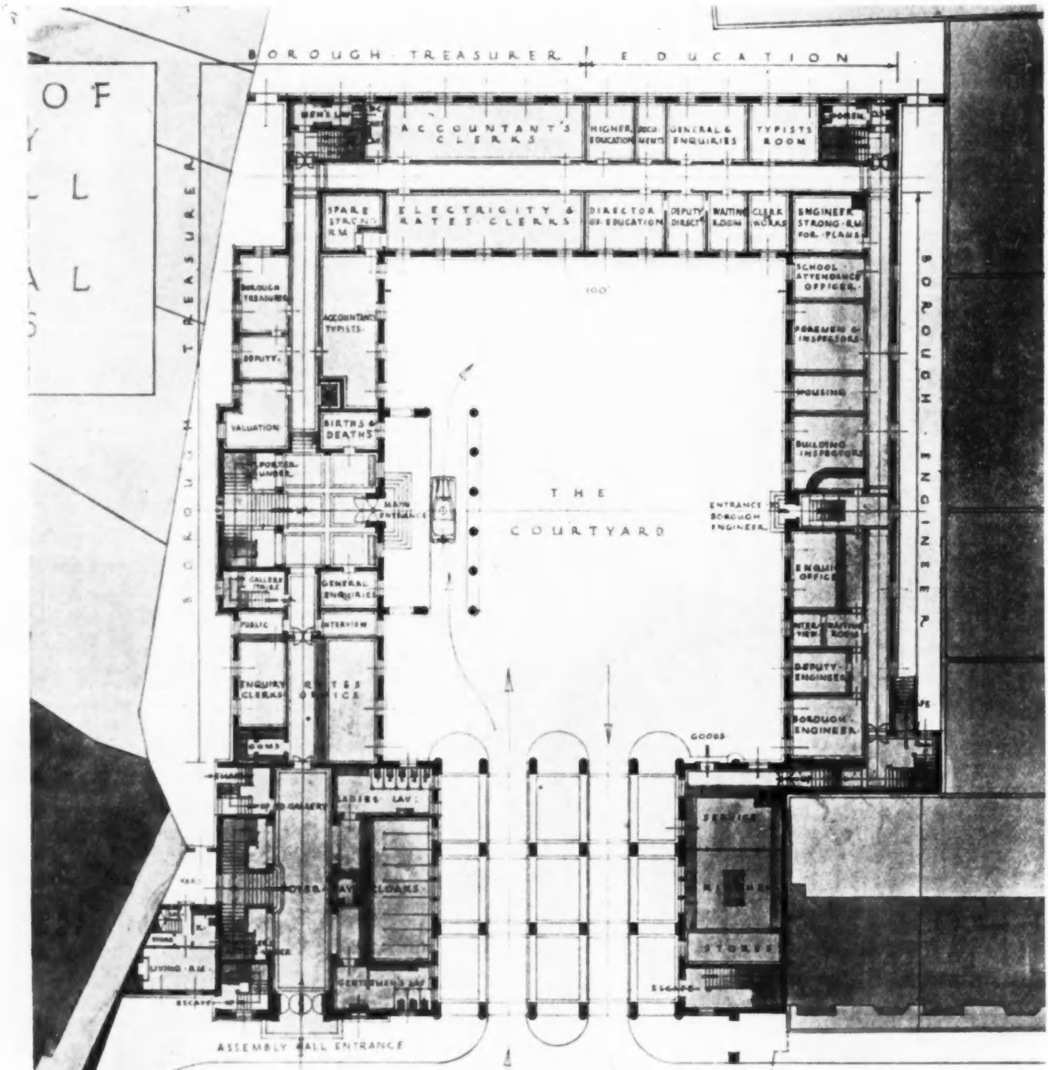

PLAN OF SECOND FLOOR


EDUCATION
UPPER PART OF STAGE
UPPER PART OF ASSEMBLY HALL
RECEPTION GALLERY
COMMITTEE ROOMS

BY J. GREY AND D. F. MARTIN-SMITH

THE HORNSEY COMPETITION:




BOROUGH · TREASURER
EDUCATION
ACCOUNTANT'S CLERKS
HIGHER EDUCATION
DOCUMENTS
GENERAL & ENQUIRIES
TYPISTS ROOM
SPARE STRONG RM
ELECTRICITY & RATES CLERKS
DIRECTOR OF EDUCATION
DEPUTY DIRECT
WAITING ROOM
CLERK WORKS
ENGINEER STRONG · RM FOR · PLANS
SCHOOL · ATTENDANCE OFFICER
100'
BOROUGH TREASURER
ACCOUNTANTS TYPISTS
DEPUTY
FOREMEN & INSPECTORS
HOUSING
VALUATION
BIRTHS & DEATHS
BUILDING INSPECTORS
PORTER
THE COURTYARD
MAIN ENTRANCE
ENTRANCE BOROUGH ENGINEER
BOROUGH · TREASURER
BOROUGH · ENGINEER
GALLERY STAIRS
GENERAL ENQUIRIES
ENQUIRY OFFICE
PUBLIC
INTERVIEW
INTERVIEW
WAITING ROOM
DEPUTY · ENGINEER
ENQUIRY CLERKS
RATES OFFICE
BOROUGH · ENGINEER
GOODS
LADIES LAV.
GALLERY
SERVICE
CLOAKS
KITCHEN
STORES
LIVING · RM
GENTLEMEN'S LAV
ESCAPE
ESCAPE
ASSEMBLY HALL ENTRANCE
HATHERLEY · GARD

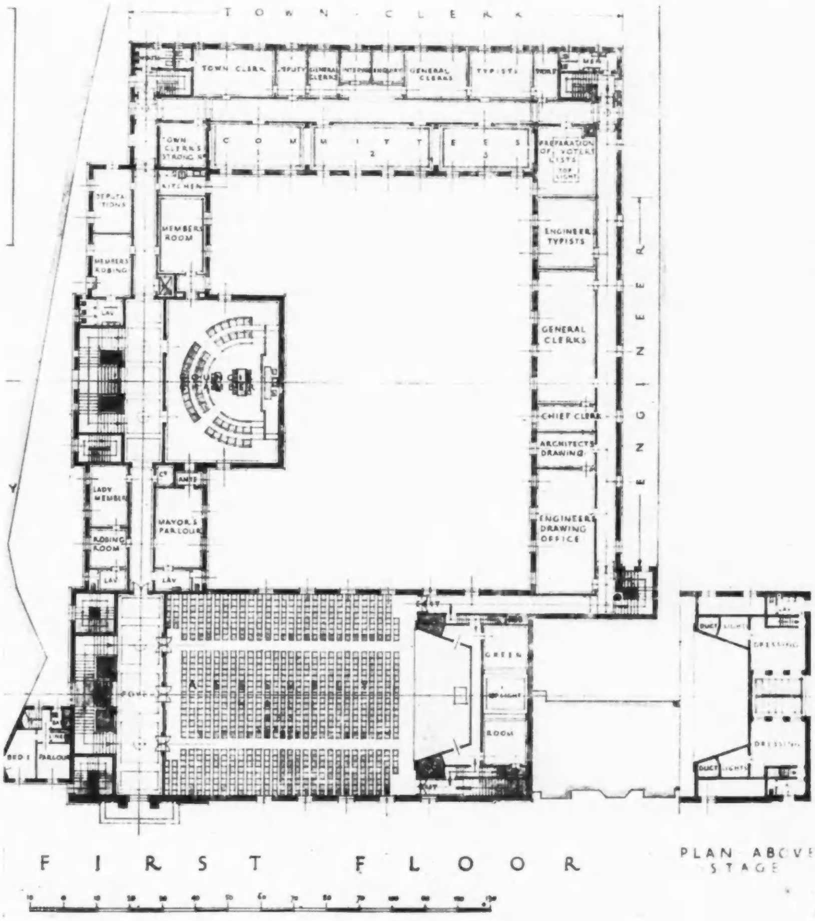
DESIGN PLACED THIRD

BY

C. H. JAMES

AND

S. ROWLAND PIERCE


TOWN CLERK
TOWN CLERK
DEPUTY
GENERAL CLERKS
INTERVIEW
ENQUIRY
GENERAL CLERKS
TYPISTS
TOWN CLERKS STRONG Rm
COMMITTEES
1
2
3
PREPARATION OF VOTERS LISTS
TOP LIGHT
KITCHEN
DEPUTATIONS
MEMBERS ROOM
MEMBERS ROBING
LAV
COUNCIL CHAMBER
ENGINEERS TYPISTS
GENERAL CLERKS
CHIEF CLERK
ARCHITECTS DRAWING
ENGINEERS DRAWING OFFICE
ENGINEER
LADY MEMBERS
ROBING ROOM
LAV
MAYOR'S PARLOUR
ANTE
LAV
ASSEMBLY
GREEN ROOM
DUCT
LIGHTS
DRESSING
DRESSING
DUCT
LIGHTS
BED 1
PARLOUR
FIRST FLOOR
PLAN ABOVE STAGE

On opposite page: elevation to Hatherley Gardens and ground floor plan; right: first floor plan.

COPPER IN ARCHITECTURE

THE GREEN PATINA

[The following is a report of a lecture given on October 12 at the Science Museum, South Kensington, on the above subject by Dr. W. H. J. Vernon of the Chemical Research Laboratory of the Department of Scientific and Industrial Research.]

IN describing the historical use of copper in architecture, Dr. Vernon said that the earliest surviving example of copper in architecture was a temple frieze excavated near Ur dating from 4000 to 3000 B.C., which was worked up from sheet copper. The earliest known Egyptian example of sheet copper work dated, he said, from 3000 to 2000 B.C., and was a life-size statue of King Pepi, in which the plates were riveted together.

The dome of the Pantheon at Rome was covered with copper or bronze in the year A.D. 130, but now only the copper cornice remained, at the present time the dome of the British Museum Library, completed in 1857, being the largest copper covered dome in existence.

The use of copper for roofing, the lecturer continued, was at one time severely restricted in this country on account of the greater skill required in its erection as compared with lead. For this reason the dome of St. Paul's was covered with the traditional lead, although the use of copper had been seriously considered by Wren in view of the great saving in weight that would be effected thereby, and the stability of the metal in the event of fire—the melting of the old lead spire in the Great Fire was then a vivid memory.

In recent times, he said, one great attraction of copper to the architect had been the development of the well-known decorative green patina in course of exposure to the open air. In this respect copper was unique among roofing materials. The composition, properties and reproduction by artificial means of the patina had been the subject of investigation at the Chemical Research Laboratory of the Department of Scientific and Industrial Research.

In these investigations it was early found that urban samples of patina consisted essentially of basic copper sulphate and not copper carbonate as was previously supposed. This clearly showed that sulphur dioxide in the air, a constituent of polluted air, and not carbon dioxide, a constituent of pure air, was the predominant atmospheric factor in the formation of the green patina. This view, Dr. Vernon pointed out, was supported by the fact that the patina was more difficult to produce in rural districts than in towns.

A relationship had been traced

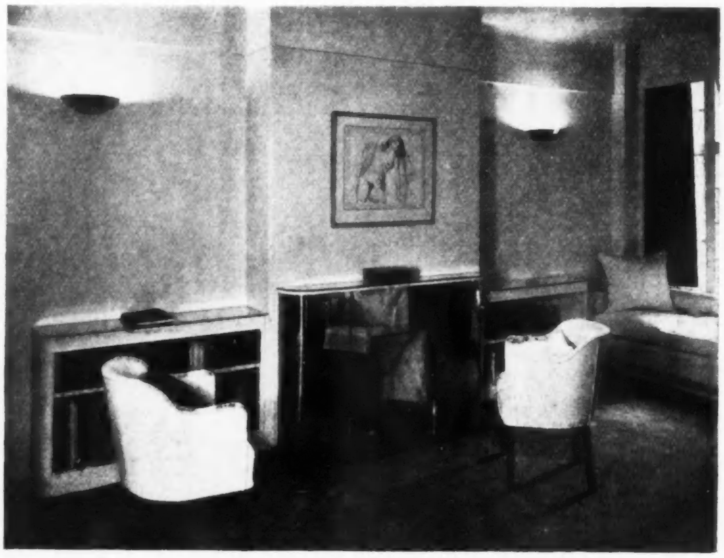
between the composition of the patina and the period of exposure. It had been found that the material formed first is the normal copper sulphate which is soluble in water, which accounts for the familiar disfigurement of stonework underlying copper or bronze statues.

After exposure for about 70 years, the normal copper sulphate is changed into a material of similar composition to the material "brochantite." This is the only basic copper sulphate that occurs in nature and the action thus affords a good example of corrosion as a process of "going back to nature." The "brochantite" having once been formed, its composition appears to remain constant for periods of exposure extending up to 300 years.

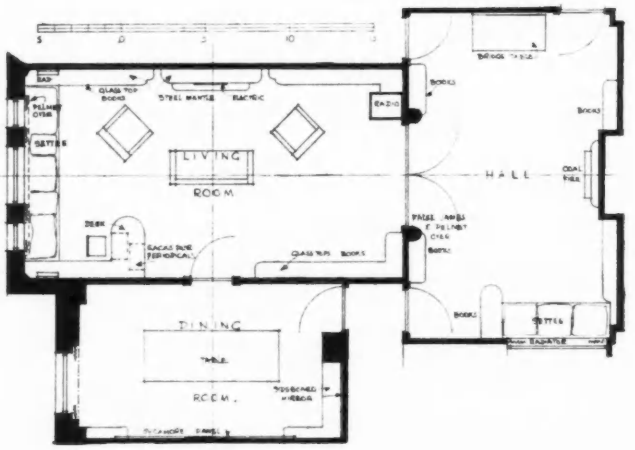
Having studied the natural production of the patina, the staff of the Chemical Research Laboratory then proceeded to consider its production artificially. Some success was achieved, the lecturer explained, by a purely chemical method, but the best results were being obtained by an electrical method in which the metal is immersed in a solution containing dissolved sulphates with the addition of an oxidizing agent. After a treatment of 15 minutes' duration under the proper conditions of corrosion and temperature, a patina is produced of a good green colour which is insoluble in water. After removing from the electrolytic bath it has been found that this deposit is changed on exposure to the air to a material having very nearly the constitution of natural "brochantite." The attainment of a green colour over the whole surface by atmospheric exposure, the lecturer stated, is proceeded by a long interim period extending from 10 to even 20 years, during which the metal presents an unsightly black appearance due to the presence of sulphide, oxide and carbonaceous matter. When produced artificially this unsightly period is eliminated. The process developed at the Chemical Research Laboratory could be applied, he said, to bronzes, but the deposit had in that case initially a bluish tinge.

With copper, by far the best results were obtained with arsenical copper (containing some half per cent. of arsenic), the presence of arsenic securing a better bond between the deposit and the underlying metal. Arsenical copper is also definitely more resistant to atmospheric corrosion, and an accumulation of arsenic has been shown to take place in the natural product. It was significant, he concluded, that of the old copper roofs of which analyses are possible, all are arsenical. It was possible, indeed, not only that arsenic is present in other copper structures of similar age, but that it may have played some part in their longevity.

A FLAT IN



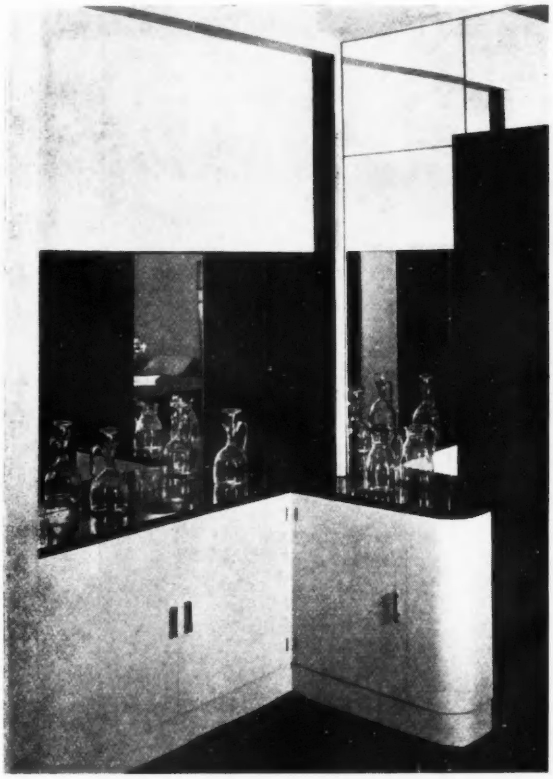
The fireplace in the hall, flanked with built-in book-cases.

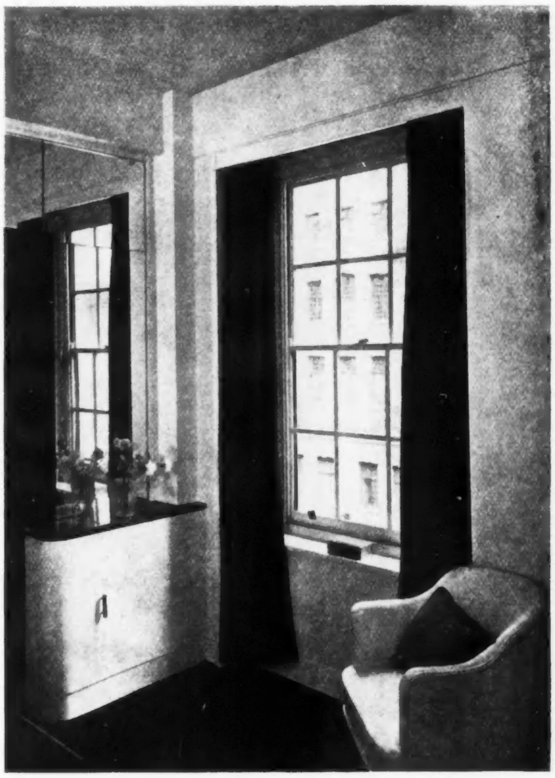


In these three rooms of a flat in Berkeley Court, Messrs. Stanley Hall and Easton and Robertson have designed general decorations, fireplace surrounds, etc., and a large variety of built-in furniture. The fitments are in mahogany, painted a broken white. The walls and ceilings are plaster, and the floors close carpeted in plain pile Saxony—a strong green in the hall and living room and blue in the dining room.

BY STANLEY HALL

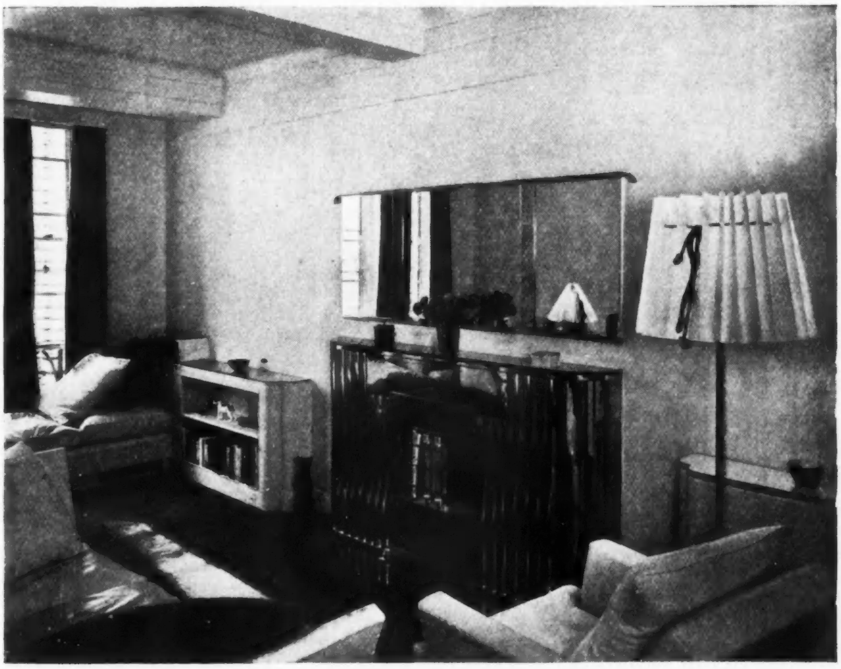
BERKELEY COURT, S.W.





Above: two views in the dining room, the left one showing the sideboard with mirror over.

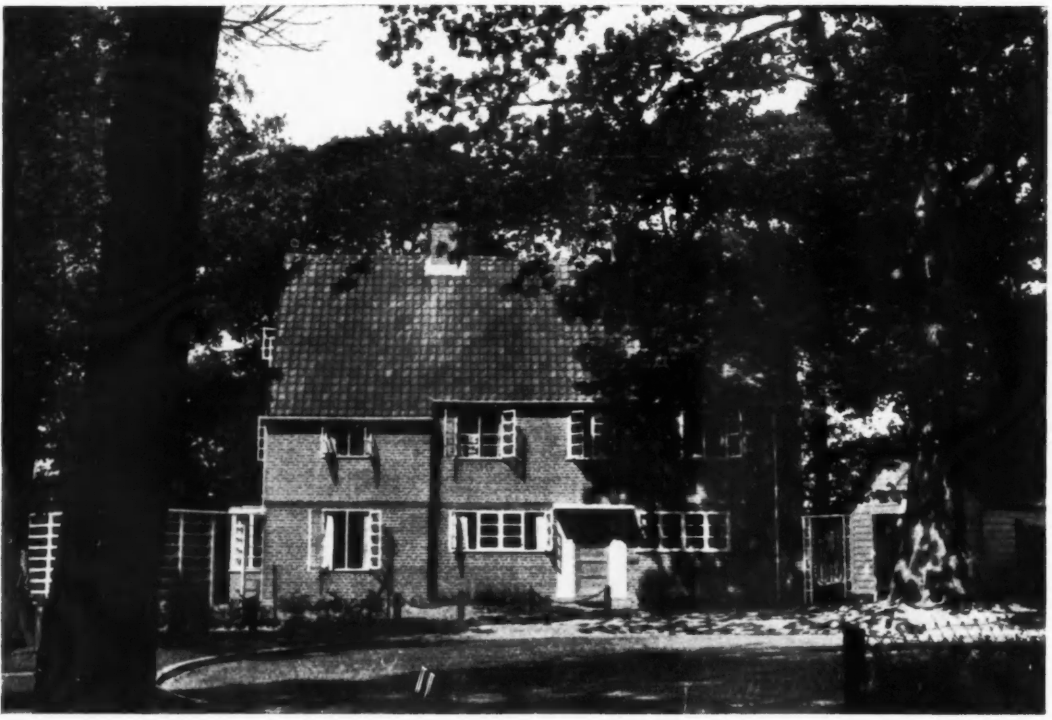
The dining room is panelled in sycamore stained a dark blue and the dining table is treated similarly. The chairs throughout are of white leather.

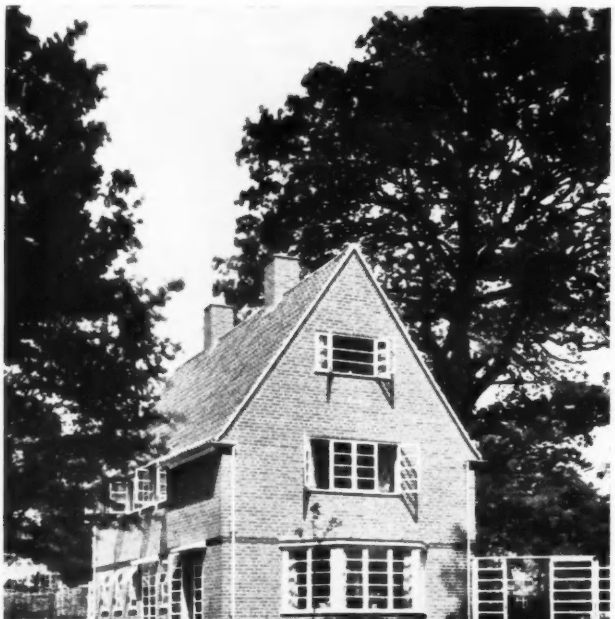


Right: the side wall of the living room, showing the central electric fire with polished metal surround and the glass-topped book-cases.

AND EASTON AND ROBERTSON

HOUSE AT WELWYN GARDEN

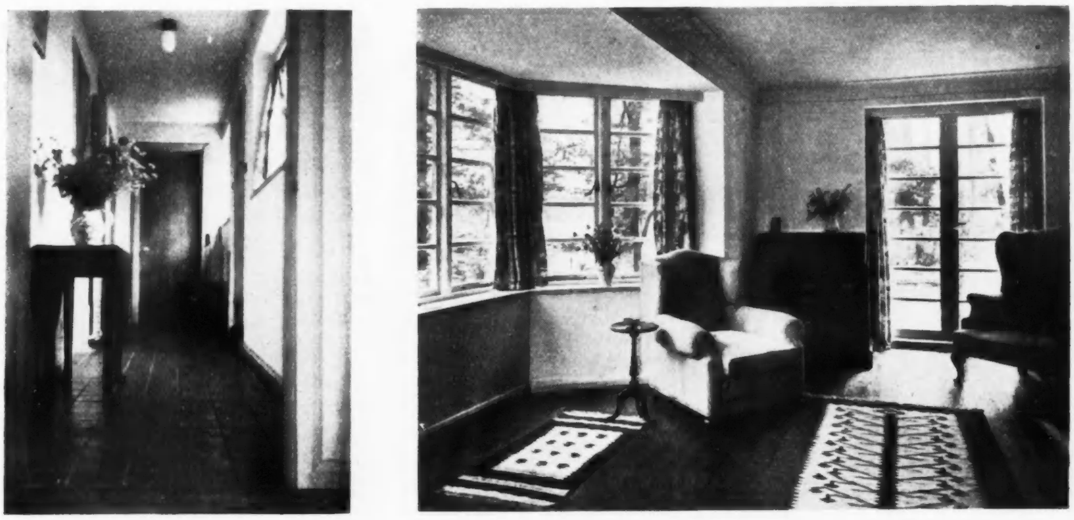


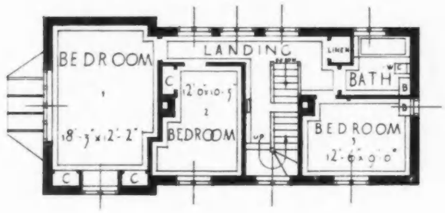


This house in Sherrards Park Road, Welwyn Garden City, was built for a total cost, including garage and all fittings, of just under £1,350. The exterior walls are faced with brown Hertfordshire bricks, and the roof is covered with pantiles. The front door, which is of oak, has a surround of white cement and a reinforced concrete hood.

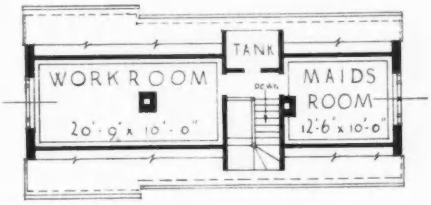
The two photographs on this page show: above, the house from the road; and, left, the south end of the house, showing the living-room bay-window looking from the garden.

CITY : DESIGNED BY C. H. JAMES

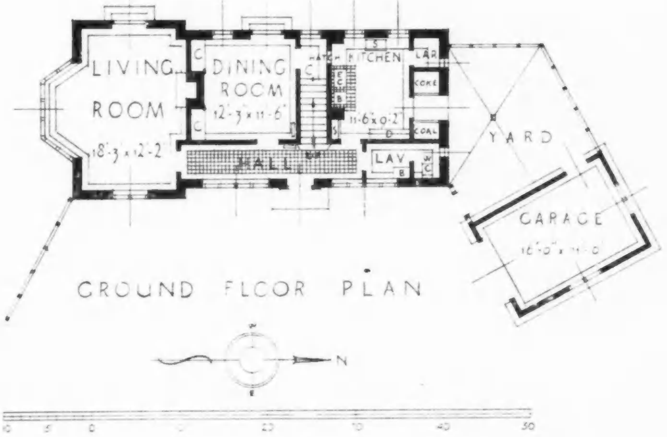



BEDROOM
1
18'-3" x 12'-2"
C
C
C
LANDING
LINEN
BATH
W.C.
B
B
12'-0" x 10'-5"
2
BEDROOM
UP
BEDROOM
3
12'-6" x 9'-0"

FIRST · FLOOR · PLAN


WORKROOM
20'-9" x 10'-0"
TANK
DOWN
MAIDS
ROOM
12'-6" x 10'-0"

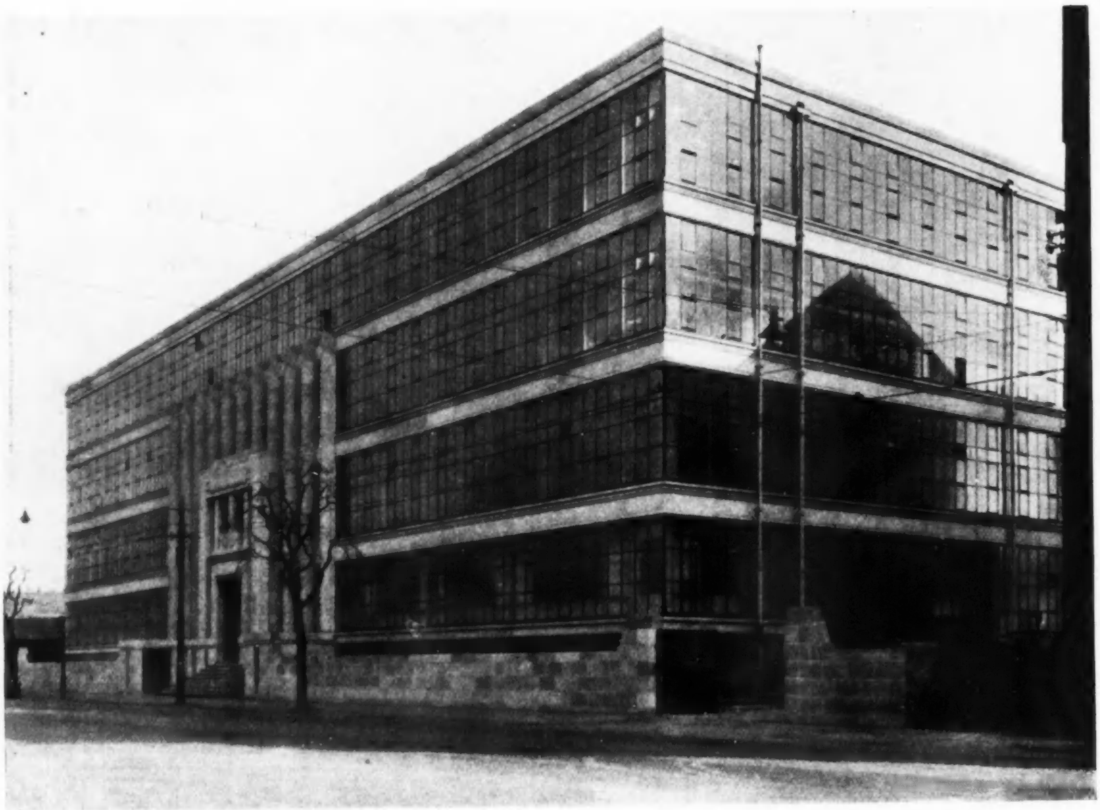
ATTIC PLAN


LIVING
ROOM
18'-3" x 12'-2"
C
C
DINING
ROOM
12'-3" x 11-6"
HATCH
C
KITCHEN
S
E
C
B
11-6" x 10-2"
S
D
LAR
COKE
COAL
LAV
B
W.C.
HALL
YARD
GARAGE
16'-0" x 11-0"
W
N
E
10
5
0
10
20
30
40
50

GROUND FLOOR PLAN

Two interior photographs: left, the entrance hall and, right, the living room. The interior is extremely simple, with flush doors having aluminium alloy door furniture, and built-in furniture and light fittings. The staircase has a solid balustrade, covered with plywood.

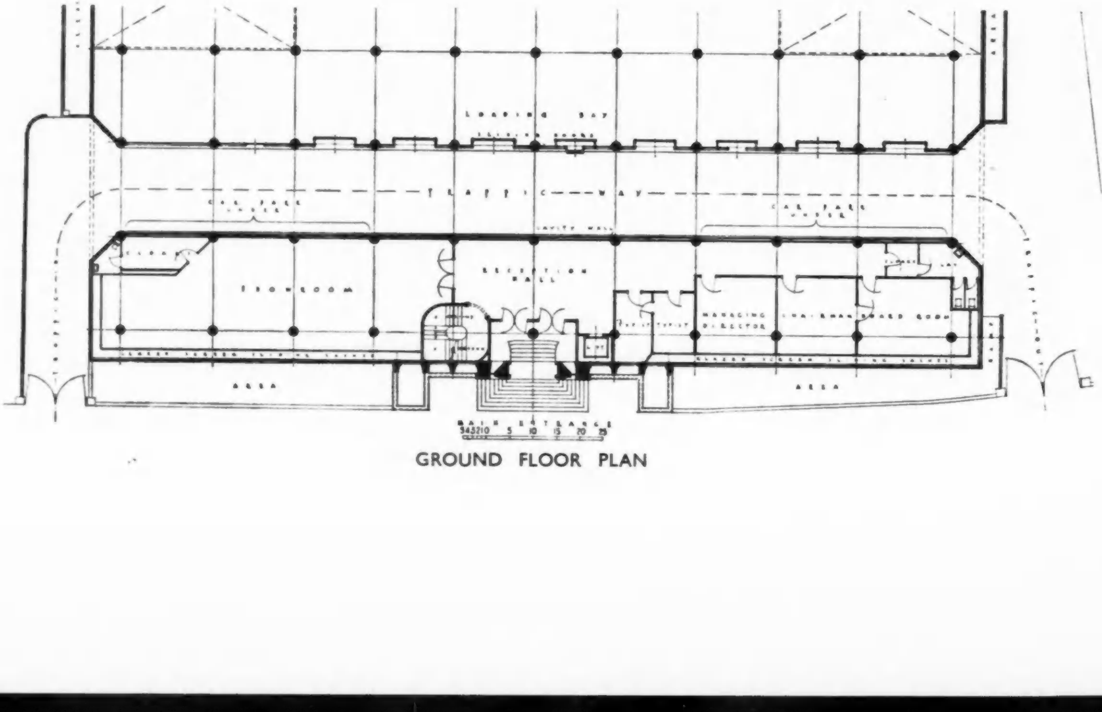
FACTORY AT NOTTINGHAM:



This is an addition to Viyella House, Nottingham, which was originally built as a five-storey factory, in 1919. The new building consists of basement, mezzanine, ground and three other floors, and is constructed in reinforced concrete of the flat beam and mushroom column type. The external facing material is artificial stone with a continuous curtain of glass.

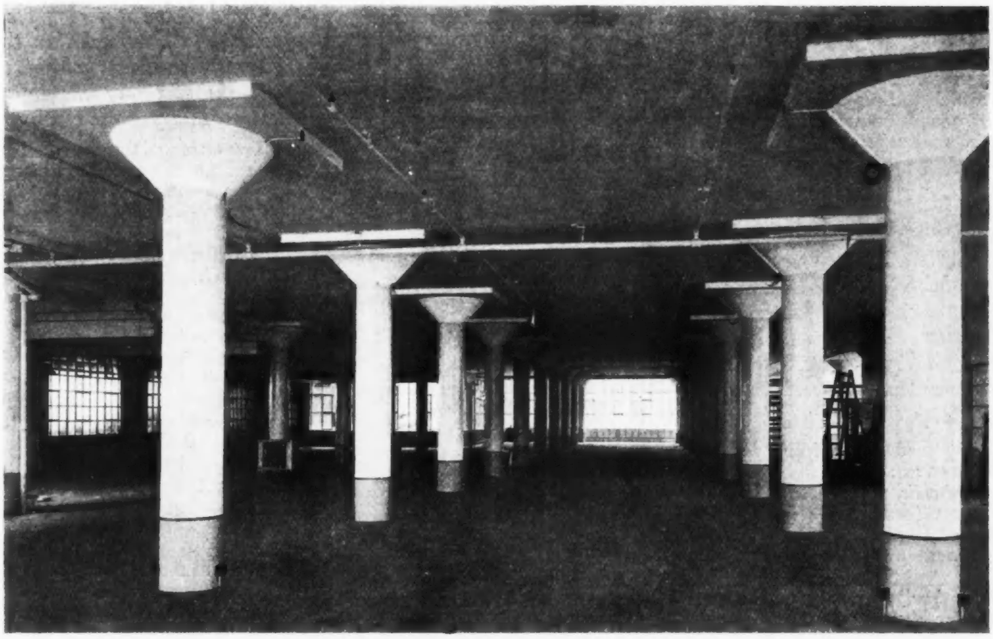
As shown in the plan below, a traffic way runs through the building at road level, from which is access to the car park and loading bays. The loading bays are connected with the packing room, which occupies the basement, by a continuous travelling slat conveyor. The packing room is, in turn, served from all floors by steel chutes.

The board room, showroom and principal administrative offices occupy the front portion of the ground floor, and the head office staff the first floor, with the production, storage and factory departments above.

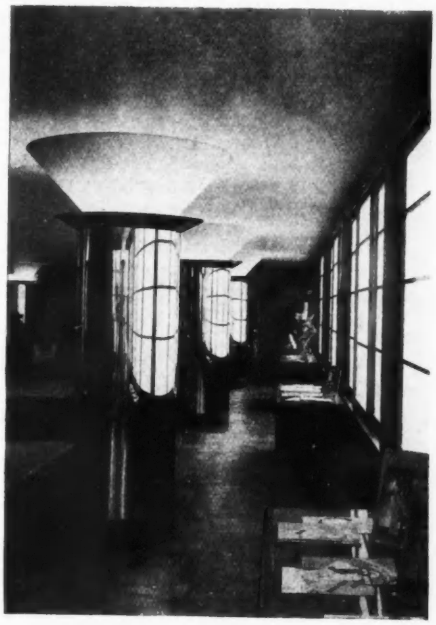

LOADING BAY
SLIDING DOORS
TRAFFIC WAY
CAR PARK UNDER
CAR PARK UNDER
CAVITY WALL
CLOAKS
SHOWROOM
RECEPTION HALL
TYPIST
TYPIST
MANAGING DIRECTOR
CHAIRMAN
BOARD ROOM
GLAZED SCREEN SLIDING SASHES
GLAZED SCREEN SLIDING SASHES
AREA
AREA
MAIN ENTRANCE
543210 5 10 15 20 25

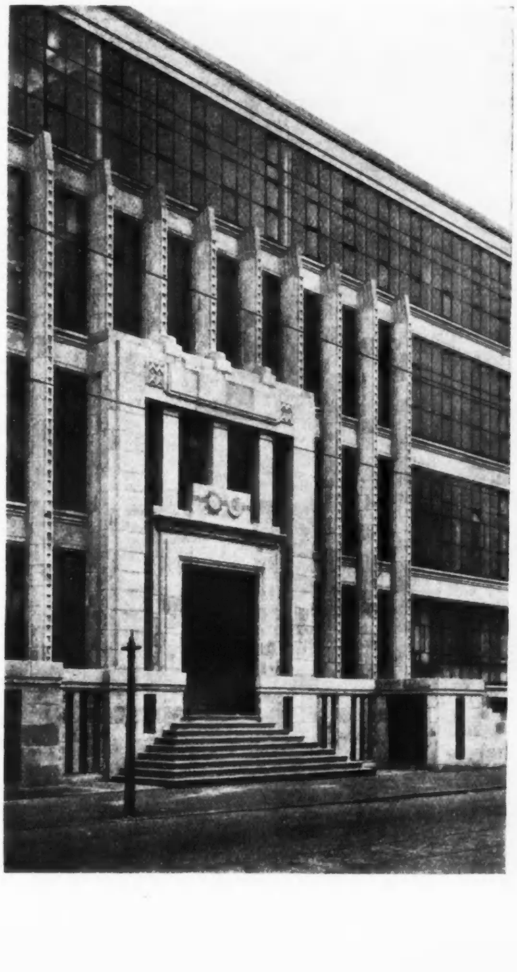
GROUND FLOOR PLAN

DESIGNED BY F. A. BROADHEAD



A view in the basement, showing the typical mushroom construction.





Above : a corner of the ground floor showroom with the columns covered in stainless steel and the mushroom capitals made use of for reflected lighting. The decoration of the interior was designed and carried out by Betty Joel under the architect's supervision. Right : the entrance portion in Castle Boulevard.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may in the course of time indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems.—Crown Copyright Reserved.

Relative Merits of Different Types of Limes for Building Purposes

¶ A CONTRACTOR requested the opinion of the Building Research Station on the properties and relative merits of a greystone lime in the form of a dry hydrate, and a high calcium "mountain" lime either in the form of a "putty" or a dry hydrate.

Limes commonly used for building purposes may be classed as :—

(*a*) *Eminently hydraulic*, i.e., those which have a definite set (comparable in some ways with that of Portland cement) and which will harden even under damp conditions.

(*b*) *Moderately hydraulic*, i.e., those which will harden under damp conditions but which have a slower set than (*a*).

(*c*) *Non-hydraulic*, i.e., those which have no inherent setting power and which harden only by drying out and subsequently by the slow process of carbonation on exposure to air.

The greystone limes come under (*b*) above, and require about one month to develop appreciable hydraulic strength. When properly hydrated, such a lime will retain its hydraulic properties, but these will be lost if putty is stored or if dry hydrate is soaked for long periods.

A high calcium lime, whether in the form of a putty or a dry hydrate, comes under (*c*) above and has in itself no definite set. Such a lime, may, however, be used for purposes where strength is required if it is gauged with a material that has a definite set, or if it is mixed with suitable types of ashes, burned clay or other pozzuolana. By the first method, an early strength corresponding to the set of the gauging material can be obtained ; by the second, the development of strength will be slow, depending on various factors such as temperature and humidity, and in this respect the mix will be more comparable with a moderately hydraulic lime.

A greystone lime may, of course, also be similarly gauged where an early or increased strength is required.

The chief difference between a dry hydrate and an ordinary putty may be said to be that a dry hydrate is purchased practically ready for use, whereas the putty has to be prepared by the builder by slaking the lime. In the former case, therefore, reliance must be placed on the manufacturer exactly as has to be done in the case of cement. The manufacturer should be prepared to give a guarantee of soundness on request, and the lime should be tested by the purchaser from time to time by the simple test devised at this Station. In the case of a putty, the builder must rely on his own experience and skill in slaking and storing the particular lime in the most suitable manner, but if these are adequate a good and sound putty should always be obtained. Although the workability of the putties from different types of lime varies considerably, mixes of dry hydrates made from different types have usually approximately similar workabilities.

The workability of a dry hydrate is usually definitely lower than that of a putty, and consequently a different technique is required by the plasterer when using such a lime. For the same reason the sand-carrying capacity of a dry hydrate is lower than that of a putty, and failures, which occur when a plasterer accustomed to the use of a putty is called upon to use a dry hydrate for the first time, are frequently attributable to the use of too much sand.

Unsoundness of a lime is manifested as overall expansion of the mortar or as "popping and pitting" due to the expansion of unslaked or unhydrated particles present in the mix. Such unsoundness may be found both in putties and in dry hydrates and, whereas a strictly limited degree of unsoundness is allowable in bricklayers' mortar, it is most undesirable in plastering limes.

Soaking a hydrate is beneficial, since it both removes unsoundness and renders the mix more plastic. The only disadvantage is that more than two hours' soaking will materially reduce any hydraulic properties present. In the case of high calcium limes, which are not hydraulic, the best practice is to mix the hydrate to a putty with hair and sand in a large pile at least the day before use. If it is to be gauged with plaster or cement, this must be done in small batches just before use.

It will be evident from the above that each of the limes under discussion have slightly different properties and call for different handling both in preparation and in use. Nevertheless, if properly handled, each can be used for various purposes and the strength of the set plaster can be adjusted by the proportions of gauging material added.

Since, however, proper handling is of such importance, it is most desirable that a plasterer, when called upon to use a lime to which he is not accustomed, should be given every opportunity thoroughly to familiarize himself with the properties of the material before using it on a large scale. Alternatively it is sometimes wise to select a lime with which the particular plasterer is familiar.

Effects on Plaster of Salt Water in Concrete Walls

¶ A FIRE which occurred in a concrete house, near the sea, was extinguished by running hoses to the beach and pumping sea water over the building.

It was later proposed to repair the house and to replaster the interior. But the architect feared that the salt water had penetrated into the body of the concrete blocks and that the salts might appear later on the face of the new plaster. He proposed having the walls washed down before replastering, and wished to know whether there was any chemical treatment which might counteract the effects of the salts or, indeed, extract them from the walls altogether.

Two classes of trouble are likely to occur as a result of the concrete having been soaked with seawater :—

(1) When the walls dry, salts may be deposited upon their inner surfaces in the form of efflorescence.

(2) If hygroscopic salts have been absorbed in any quantity, the walls may remain permanently damp.

The Building Research Station has no record of any chemical which could be used with water to prevent the efflorescence of the salts. Moreover, it is quite likely that washing with plain water might tend to drive the salts back into the body of the wall. A better method would be to dry the walls as thoroughly as possible before replastering and to remove, by vigorous brushing, the salts which come to the surface.

After as much efflorescence as possible has been removed in this way, a wash of sodium phosphate solution could be applied, and would tend to convert the hygroscopic salts into non-hygroscopic compounds. Although the Building Research Station has no direct experience of such a treatment, it is understood that the method has been applied with success in a previous similar case.

It is suggested that after the walls have been dried and brushed to remove efflorescence, they should be lightly sponged down with a solution of not more than 1 lb. of disodium hydrogen phosphate to two gallons of water and then allowed to dry. If signs of dampness persist the process may be repeated, but this should not be done more than once or twice.

The above treatments may be satisfactory if the walls have only absorbed a small quantity of salts from the sea water. A more certain method of ensuring freedom from both classes of trouble would be to batten out with creosoted timber and finish either with lath and plaster, or with wallboard, which would thus be out of capillary contact with the brickwork.

Temperature Rise in a Concrete Bridge

¶ AN arch bridge was to be built in 1 : 2 : 4 concrete, the abutments being 8 ft. wide, 12 ft. high, and 30 ft. long, and the arch rib 2 ft. thick. The public authority concerned wished to know what would be the temperature rise in the abutment during setting and hardening, and also the ratio of the annual temperature fluctuation in this abutment to the annual fluctuation in the arch rib.

During the process of setting and hardening the temperature of concrete rises to a maximum and then falls. The magnitude of the rise and the subsequent rate of cooling depends, amongst other things, on the size of the mass of concrete and the type of cement used. The maximum temperature rise will be attained near the centre of the mass, and there will be a temperature gradient from this point to the exterior surfaces, since these latter lose heat more readily by radiation and conduction to the air. Several months may elapse before the temperatures throughout the mass have fallen to a fairly uniform value. During the cooling period an uneven distribution of the stresses will be set up as a result of the irregular temperature gradients in the mass, and the unevenness will be particularly marked if the concrete has been placed rapidly and in large quantities.

In this particular case, it is estimated that if the whole abutment is poured in one operation, using good quality Portland cement, the temperature rise during setting and hardening is likely to be of the order of 75° to 80° F., and under normal conditions, two months or more would be needed for the mass to cool down to the average air temperature. The possible ill effects of high internal temperatures could be reduced by concreting the abutments in lifts of, say, three to four feet, with intervals of one to two days between each lift to assist in the dissipation of the heat evolved.

With regard to the second query, it is evident that during alternate hot and cold weather the fluctuation in temperature of the large mass of the abutment will be less than the fluctuation of the arch rib. It is estimated that the annual range of variation in temperature in the abutment will be approximately two-thirds of that in the arch rib.

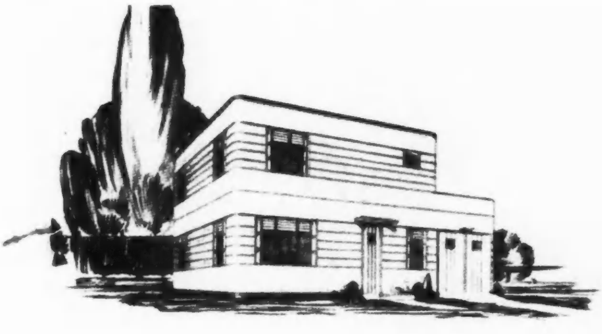
Concrete Bricks

¶ A SURVEYOR asked the general opinion of the Station on concrete bricks, particularly with reference to their load-bearing capacity, resistance to moisture penetration and suitability as a base for plaster or external rendering. In particular he wished to know whether a calcium sulphate (gypsum) plaster could safely be applied to them.

As with all cement products the method of manufacture and particularly the control of drying and maturing of concrete bricks is of very great importance. All cement products are liable to considerable shrinkage on drying, and it is important that this shall have taken place to the greatest possible extent before the bricks are used. The Building Research Station has examined cases where inadequately matured bricks laid in a wall have subsequently led to the formation of shrinkage cracks penetrating through the wall and sufficiently large to allow moisture to enter.

The permeability and load bearing capacity of concrete bricks depends, of course, on the quality of the particular product, but bricks made by a reliable manufacturer should be satisfactory in these respects for all ordinary building purposes.

The satisfactory application of external rendering or internal plaster must again depend on the nature of the particular brick since the "suction" of the brick will play a part. There is, however, no reason why plaster should not be applied to satisfactory bricks, and there should be no objection to using a calcium sulphate plaster. The high moisture movement of concrete bricks as compared with clay bricks must, however, increase the possibility of shrinkage crack formation in any plaster or rendering.



TRADE NOTES

[*BY F. R. S. YORKE, A. R. I. B. A.*]

Frameless Steel Houses

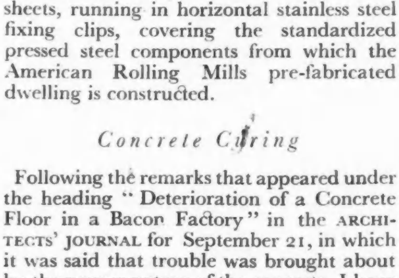
SEVERAL readers have written asking whether I have a photograph of a completed frameless steel house of the American Rolling Mills type. Up to the present time I have been unable to obtain such a photograph, but the pencil sketch reproduced above gives a general idea of the appearance of porcelain enamel steel sheets, running in horizontal stainless steel fixing clips, covering the standardized pressed steel components from which the American Rolling Mills pre-fabricated dwelling is constructed.

Concrete Curing

Following the remarks that appeared under the heading "Deterioration of a Concrete Floor in a Bacon Factory" in the ARCHITECTS' JOURNAL for September 21, in which it was said that trouble was brought about by the porous nature of the concrete, I have received a communication from the manufacturers of Sisalkraft, who say the trouble could never have occurred had the concrete been properly cured when laid, and that for this curing process Sisalkraft, a waterproof, untearable building paper, is ideal.

◆

Concrete sets after a few hours' exposure, but under favourable conditions its strength continues to increase for weeks or months after the initial set. Hardening is due to chemical reactions between Portland cement and water and the process continues indefinitely, so long as temperature is favourable and moisture is present to complete the hydration. The quality of concrete, therefore, is dependent on its age and the conditions under which it cures.


TOP SHEET OF KRAFT PAPER
SECOND LAYER OF ASPHALTUM
CROSS SISAL FIBRES
LONGITUDINAL SISAL FIBRES
FIRST LAYER OF ASPHALTUM
BOTTOM SHEET OF KRAFT PAPER

Six-ply waterproof reinforced building paper, used for curing concrete.

◆

Proper curing is of prime importance in securing watertightness. If concrete is left exposed to the sun and wind before it has been properly cured, much of the water necessary for the hardening will evaporate, and the mixture will simply dry out, resulting in a weak, porous material.

◆

By the Sisalkraft method special waterproof building paper is laid over the concrete as soon as the material has taken its initial set, and allowed to remain for as long a time as possible. This covering makes evaporation so slow that the moisture is able to combine with the cement, and the paper is sufficiently tough to withstand wear from traffic in such places as workshops or garage floors, and so to protect the concrete surface. At the end of the desired curing period it is rolled up and taken away, removing with it any dirt or drippings that may have fallen on it, leaving the surface clean. If wear is not too heavy the same paper may be used several times.

◆

Sisalkraft is made from crossed layers of untwisted, non-elastic Java sisal fibres, embedded in asphalt and covered with heavy kraft paper. Its composition is shown in the accompanying diagram.

◆

The following is a standard specification for curing and protecting concrete by the Sisalkraft method, suggested by the manufacturers: "As soon as the concrete is hardened sufficiently to be safely walked upon it shall be immediately thereafter completely covered with Sisalkraft, applied in the widest width practical, allowing at least a 4 in. lap, and sealed with Sisalkraft waterproof cement. The entire covering to be left on the floor until completion of the building."

Hollow Brick Floors

The Kleine Company issue this month a new handbook on hollow brick construction for floors, flat and sloping roofs, staircases and balconies, etc. It is unusually well produced, and arranged for quick reference, with sheets of thick paper interleaved at the beginning of each sub-section in such a fashion that by turning over the leaves in the usual manner one finds only a series of section headings, the explanatory matter on thin paper falling in each case with the thicker leaf preceding it.

●

The book is divided into sections under the following headings: Design and execution, types of loading; spans and supports; physical properties; application of finishes and coverings; accommodation of services and fixing of machinery; balcony steppings, staircases and sloping roofs; precast beam floors; and extracts from London Building Acts.

●

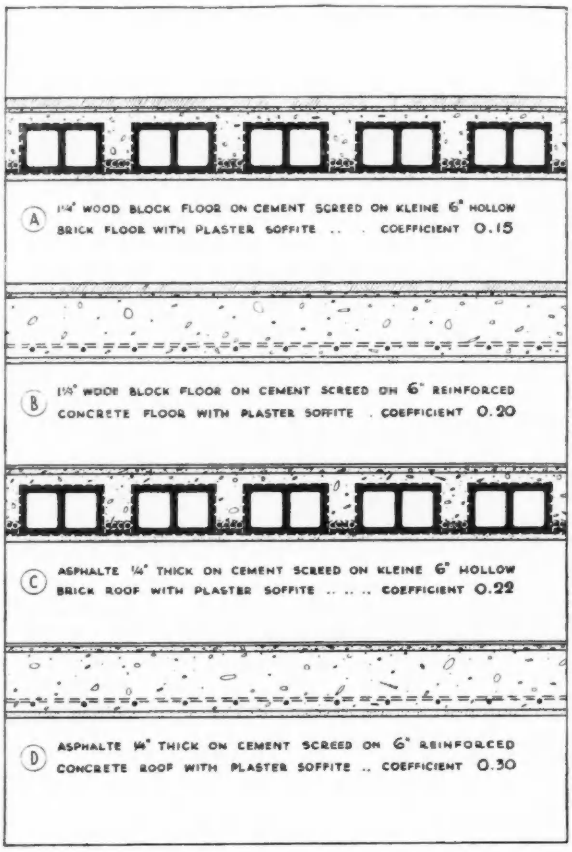
The original master patent for reinforced brick floors was granted to Mr. J. F. Kleine in 1892. Having realized the disadvantages of concrete floors, namely, their great dead-weight, resonance, expansion and deterioration when exposed to fire, hygroscopic nature and conductivity, and the difficulty of ensuring their construction in accordance with design, Mr. Kleine experimented with other materials and found that clay bricks built in cement mortar formed an equally inseparable and homogeneous slab, which could be effectively reinforced with hoops or rods inserted in the cement mortar or concrete joints between the brick courses.

●

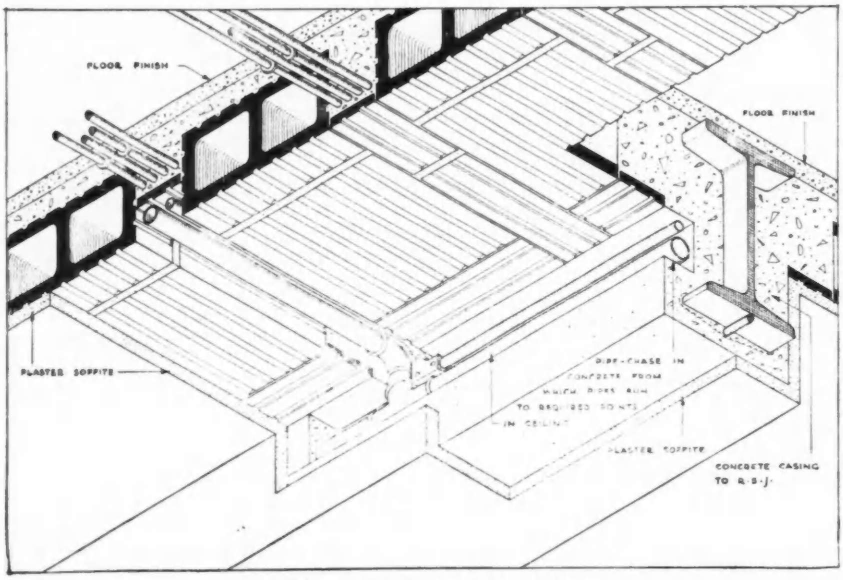
Although most of the afore-mentioned disadvantages were obviated, the reduction in deadweight resulting from the use of solid bricks was not very great. It was found, however, that without increasing the thickness of the floor hollow bricks had the same strength as and approximately half the weight of solid bricks.

●

The various stages of construction for single floors, and special forms of construction for cantilivered balconies, curved balconies, and special arrangements for accommodating services and fixing machinery, are illustrated in the handbook by clearly-drawn diagrams, and a separate section deals with boring and cutting holes in hollow brick floors.


(A) 1¼" WOOD BLOCK FLOOR ON CEMENT SCREED ON KLEINE 6" HOLLOW BRICK FLOOR WITH PLASTER SOFFITE .. .. COEFFICIENT 0.15
(B) 1¼" WOOD BLOCK FLOOR ON CEMENT SCREED ON 6" REINFORCED CONCRETE FLOOR WITH PLASTER SOFFITE . COEFFICIENT 0.20
(C) ASPHALTE ¼" THICK ON CEMENT SCREED ON KLEINE 6" HOLLOW BRICK ROOF WITH PLASTER SOFFITE .. .. .. COEFFICIENT 0.22
(D) ASPHALTE ¼" THICK ON CEMENT SCREED ON 6" REINFORCED CONCRETE ROOF WITH PLASTER SOFFITE .. COEFFICIENT 0.30

Hollow brick floors: heat loss coefficients (heat loss downwards). The coefficients indicate the number of B.T.U.s lost per hour per sq. ft. of floor area for one deg. (F.) difference in temperature between top and soffit of floor.


FLOOR FINISH
FLOOR FINISH
PLASTER SOFFITE
PIPE-CHASE IN CONCRETE FROM WHICH PIPES RUN TO REQUIRED POINTS IN CEILING
PLASTER SOFFITE
CONCRETE CASING TO R.S.J.

Accommodation of services in a hollow brick floor.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue:—

House at Welwyn Garden City (pages 488-489). General contractor, Frederick Palmer, Ltd. Sub-contractors: Venesta, Ltd., flush doors; Troughton and Young, light fittings; Shanks & Co., Ltd., sanitary fittings; James Gibbons, Ltd., door and window furniture; Pinchin Johnson, Ltd., paint; Bratt Colbran & Co., Ltd., living-room fireplace and electric fire.

Bandstand, Stourbridge (pages 475-477). General contractors, James Taylor and Son. Sub-contractors: Hill and Smith, steelwork; General Electric Co., light fittings; Hubert Jones & Co., electrical installation; Mobberley and Perry, Ltd., bricks; Constable, Hart & Co., paving.

Flat in Berkeley Court (pages 486-487). General contractors, D. Burkle and Sons, Ltd., responsible for all work except that by the following: Marion Dorn, carpets; F. H. Pride, Ltd., wall reflectors; Jade, Ltd., curtains; Peter Jones, Ltd., settee; Troughton and Young, Ltd., ceiling bowls.

Viyella House, Nottingham (pages 490-491). General contractors, Gilbert and Hall, Ltd. Sub-contractors: The London Sand Blast Co., windows; General Asphalte Co., Ltd., asphalt; Nottingham Builders Brick Co., bricks; Trent Concrete, Ltd., artificial stone; The Helical Bar Co., Ltd., structural steel; Independent Sprinklers, Ltd., fire protection; National Brick Co., partitions; Pilkington Brothers, Ltd., glass; W. H. Heywood & Co., Ltd., patent glazing; Hollis Bros., wood-block flooring; Ashwell and Nesbit, Ltd., central heating and ventilation; Robin Hood Boilers, Beeston, boilers; J. and S. Farr, Ltd., electric wiring, light fixtures and signs; A. R. Knight, plumbing; Doulton & Co., sanitary fittings; Empire Stone Co., stair treads; Parker, Winder and Achurch, door furniture; Crittall Manufacturing Co., casements; Haywards, Ltd., folding gates; Midland Plastering Co., plaster; Birmingham Guild, Ltd., metalwork; W. J. Furse & Co., Ltd., lifts; Callender's Cable and Construction Co., Ltd., cables; Siemens-Schuckert, Ltd., conveyors, chutes and pneumatic post system.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

CATERHAM. *Houses, Flats and Shops.* Plans passed: Three houses, Court Road, for Mr. C. Cooper ; two houses, Farleigh Road, for Mr. A. E. Guest ; 16 houses, Tillingdown Lane, for Mr. C. H. Harrington ; four shops and flats, The Crescent, Woldingham, for Mr. A. M. Cawthorne ; two houses, Trenham Drive, for Messrs. Westwood and Ruddle ; development, Markfield Estate, for Mr. J. A. Smith ; four houses, Nelson Road, for Mr. W. Sandiford ; shop and office, Limpsfield Road, for Mr. W. Bex.

DARTFORD. *Houses.* Plans passed : 132 houses and 40 bungalows, Priory Park estate, for Mr. W. J. Brise ; two houses, Devonshire Avenue, for Mr. R. F. Rons ; three houses, Summerhouse Drive, for Mr. W. Kerslake ; three houses, Brent Lane, for Messrs. W. J. Draper and Son ; two houses, Joydens Wood Road, for Mr. J. Goodrich ; eight houses, Rosebery Gardens, for Mr. W. G. Cooper.

FRIERN BARNET. *Houses and Flats.* Plans passed : Flats, corner of Church Way and Middleton Park, for Messrs. Nugent and Sons ; four houses, Friary Way, for Mr. A. Bryett ; two houses, Great North Road, for Mr. H. Brook ; two houses, Oakleigh Road, for Mr. W. R. Haward ; two houses, Friern Park, for Mr. A. E. Pickett ; 33 houses, Torrington Avenue, for Messrs. F. J. Lawes and Son ; seven houses, Alexandra Road, for Mr. P. Granville ; three houses, Oakleigh Road, for Mr. E. Roberts ; two shops and flats, Great North Road, for Messrs. A. W. Cattle and Son ; flats, Colney Hatch Lane, for Messrs. Pickering and Sons ; 92 houses under clearance schemes.

HAMPTON. *Houses and Shops.* Plans passed : 33 houses, Westbrook Avenue, for Messrs. R. Hewett, Ltd. ; three shops, Oldfield Road, for Messrs. Potter and Goldsmith.

ILFORD. *Houses, Bungalows and Shops.* Plans passed : 86 houses, Ardwell Avenue, for Messrs. W.Goodchild & Co.; 24 houses, Felstead Gardens, 44 houses, Ramsgill Drive, 30 houses, Applegarth Drive, and four houses, Headley Approach, for Mr. J. Aldridge ; six shops and houses, Norman Parade, two bungalows, Craigmont Gardens, 12 bungalows, Camberra Gardens, and 48 houses, Joydon Drive, for Mr. G. F. Seigerts ; two houses, Stonehall Drive, for Mr. P. G. Ashton ; eight bungalows, Netley Villas, for Mr. L. A. Warner ; seven houses, Edwin Gardens, for Mr. T. Anders ; two bungalows, Falmouth Gardens, for Mr. W. M. Edwards ; three flats, Mansfield Road, for Mr. W. D. Key ; ten bungalows, Bella Gardens, for Mr. J. Giles ; 18 houses, Highwood Gardens, for Messrs. A. Smith and Sons ; 20 houses, Fencepiece Road, and five houses, Chase Lane, for Messrs. Haines and Warwick, Ltd. ; two houses, Corona Gardens, for Mr. W. Butcher ; 17 houses, Holmfield Avenue, for Mr. J. W. Lohden ; four houses, Laurel Gardens, for Mr. J. T. Perrin ; 16 houses, Chadwell Heath Lane, for Padwell Estates, Ltd. ; 25 houses, Glenthorne Gardens, for Mr. R. Prior ; 10 houses, Danehurst Gardens, for Messrs. L. and F. Philby ; five shops and houses, High Road, Chadwell Heath, for Messrs. Trehearne and Norman Preston.

LEWISHAM. *Houses and Shops.* Plans passed : Shops, Downhay Way, Grove Park, for Mr. C. Durbin ; 10 houses, Horniman Drive, for Mr. H. Macintosh ; 22 houses, Thornsbeach Road, for Messrs. James Watt, Ltd. ; 11 shops, St. Mildred's Road and Hither Green Lane, for Mr. A. Frampton.

SOUTHGATE. *Houses and Shops.* Plans passed: 23 houses, Bush Hill, for Mr. G. W. Newman ; four shops (amended plan), The Quadrant, for Mr. C. Stanley Brown ; New roads, adjoining Ashfield Road, etc., for Messrs. Swannell and Sly ; 19 houses, Hedge Lane, for Mr. G. Newman ; two houses, Brookdale, for Messrs. James Estates, Ltd. ; two houses, Ringwood, Roseneath estate, for Mr. C. E. Ward ; three houses, Wilmer Way, for Mr. H. C. Keene, junior ; amended lay-out of 170 houses, Chas Vale Farm estate, for Messrs. Geo. Wimpey & C Ltd. ; 20 houses, Morton Way, for Mr. G. Bolton ; 15 shops, Ashfield Road, for Messrs. Marrable Bros. ; six houses, Broadfields Avenue, for Messrs. Reader Bros. ; lay-out for 193 houses, Firs Lane, for Messrs. H. Seymour Couchman and Sons ; four shops, Warwick Road, for Mr. P. M. Fraser ; two houses, Trent Gardens, for Mr. L. O. Lale ; 80 flats, Bowes Road, for Mr. H. S. Fleming ; 170 houses, Chase Vale Farm Estate, for Messrs. G. Wimpey & Co., Ltd. ; four houses, Reservoir Road, Southgate, for Mr. F. Ferrier Tomlin ; nine shops, Ashfield Road, for Messrs. Marrable Bros. ; three houses, Cross Road, for Mr. H. A. Gurr.

SOUTHERN COUNTIES

GRAVESEND. *Housing Scheme.* The Corporation is acquiring 35 acres at Chalk for another housing scheme.

HASTINGS. *Houses and Shops.* Plans passed : Two shops and nine houses, Battle Road ; two houses, Park estate, four bungalows, Fairlight Avenue, two houses, St. Helens Down Road, two houses, Belmont estate, for Messrs. Jeffrey and Bowcock ; estate development, Amherst Road, for Mr. D. Newton Padgham ; four houses, Saxon Road, and shop, Old London Road, for Mr. J. Hunt ; two houses, Hoads Wood Road, three houses, St. Helens Road, and seven houses, Old London Road, for Messrs. Henry Ward, Son and Wray ; three bungalows, Tile Kiln estate, for Mr. T. F. Smith ; four houses, Old London Road, for Mr. H. L. Webb ; four houses, Adelaide Road, for Mr. H. Slade ; six houses, Blacklands Drive, and six houses, Keppel Road, for Mr. A. Honnor ; four houses, Battle Road, for Messrs. Brazil and Frost.

PORTSMOUTH. *Houses, Bungalows and Shops.* Plans passed : Six houses, Carmarthen Avenue, for Mr. J. C. Nicholls ; billiard hall and shop, London Road, for Messrs. E. and A. Springings ; two bungalows, Carshalton Avenue, for Mr. E. W. Payne ; six bungalows, South Road, Drayton, for Messrs. Cortis and Hankins ; shop premises, 167–9, Lake Road, for Messrs. Alders ; 10 houses, Stride Avenue, for Messrs. G. Coleman and Son ; three houses, Copnor Road, for Mr. C. Gutteridge ; 16 houses, Second Avenue, Farlington, for Messrs. Cooke and Bamber ; six houses, Carmarthen Avenue, for Mr. P. T. Price ; 30 houses at Wymering at an estimated cost of £11,600.

WINCHESTER. *Assize Courts.* The Hampshire C.C. has instructed the county architect to prepare plans for the reconstruction of the Winchester Assize Courts, at an estimated cost of £40,000.

MIDLAND COUNTIES

CHELTENHAM. *Houses.* Plans passed : Four houses, Queen's Road, for Mr. G. A. M. Hall ; four houses, Sydenham Road, for Mrs. R. L. Instone ; two houses, Hatherley Road, for Mr. J. Parker ; two houses, West Drive, Pittville, for Mr. G. Hall ; two houses, King's Road, for Messrs. Goddard and Hurst ; two houses, Southam, for Mr. G. P. Hopcraft ; two houses, Southam, for Mr. H. L. Whitaker ; lay-out for 22 houses, Glebe Road, Prestbury, for Mr. G. A. M. Hall.

SOUTH-WESTERN COUNTIES

PLYMOUTH. *Cinema, Houses and Shops.* Plans passed: Cinema, Exeter Street, for Mexboro, Ltd. ; estate development, Trelawney Road, for Messrs. Hill and Lang ; four houses, Fisher Road, for Mr. W. Bates ; two houses, Cranmere Road, for Messrs. J. Davy and Son ; seven houses, Pemros Road, for Mr. C. Jope ; four houses, Mollison Road, for Messrs. A. E. Searle and Son ; four houses and shop, Ganges Road, for Messrs. Pearce Bros. ; 12 houses, Vicarage Road, St. Budeaux, for Mr. W. Andrews ; four houses, Ridge Park Avenue, for Mr. J. Neal ; four houses, Vine estate, for Messrs. Williams and Gray ; six houses, East Park Avenue, for Mr. J. Thomas ; 14 houses, Orchard Road, for Mr. F. Westcott ; 8 houses, Fisher Road, for Messrs. Waycott Bros. ; new hall, Elliot Street, for Sincerity Masonic Hall trustees ; three houses, Thornhill Road, for Mr. R. H. Roberts ; two houses, Swilley Road, for Mr W. Edgecombe.

NORTHERN COUNTIES

BLACKPOOL. *Houses, Flats and Shops.* Plans passed : Four shops and houses, Westcliffe Drive, for Mr. N. Rideot ; four houses, Queen's Drive, for Mr. Percy Wood ; six houses, Fleetwood Road, for Mr. J. Kennard ; three flats, Harrowside, for Mr. M. Bourne ; two houses, Devonshire Road, for Messrs. J. W. Lee, Ltd. ; two houses, Claremont Avenue, for Messrs. Sherratt and Smith ; 16 houses, Walpole Avenue, for Lancashire Construction Co., Ltd. ; three shops, offices and house, Preston New Road, for Mr. H. Best ; two houses, Fleetwood Road, for Messrs. R. & H. Fletcher, Ltd. ; two houses, Maurice Grove, for Mr. Fred Parkinson ; 22 houses, Primrose Avenue, for Mr. R. Eaves ; six houses, The Close, for Mr. A. A. Holt ; four houses, Low Moor Road, for Mr. T. Brierley ; four houses, Cornwall Avenue, for Messrs. T. Bannister and Co ; two shops and houses, Fleetwood Road, for Mr. S. Brooks ; two houses, St. Luke's Road, for Mr. C. Birtwistle ; two houses, St. Martins Road, for Mr. E. Hodgkiss ; 12 houses, St. Luke's Road, for Mr. H. Hodgson ; 12 houses, Eastbourne Road, for Messrs. A. and G. R. Fletcher ; eight houses, Stoney Hill Avenue, for Mr. G. Woodhead ; two houses, Dunes Avenue, for Mr. A. Turner ; two houses, Wilson Square, for Messrs. Kennard and Mills ; two houses, Broderick Avenue, for Warbreck Building Co., Ltd. ; three houses, South Park Drive, for Mr. J. Lees ; 13 houses, Marton Drive, for Mr. H. Eckersley ; five houses, Park Road, for Mr. A. J. Waterhouse ; four houses, Elm Avenue, for Mr. J. W. Blacow ; six houses, Albany Avenue, for Mr. T. Foster ; 24 houses, Horncliffe Road, for Messrs. A. and G. R. Fletcher ; three houses, Orchard Avenue, for Mr. J. Midgley ; 61 houses, off Abbey Road, for Mr. James Hayes ; five house Greenwood Avenue, for Mr. T. Threlfall ; new wing, Norbreck Hydro, for Cliffs and Norbreck Hydro Co.

DEWSBURY. *Houses.* Plans passed : Six houses, Ossett Lane, for Mr. J. F. Ekert ; four houses, Pentland Road, for Mr. J. Tierney ; four houses, Falcon Road, for Mr. A. A. Williams ; 24 houses, Scout Hill, for Mr. G. A. Smith ; eight houses, Coniston Road, for Messrs. E. Jones and Sons, Ltd. ; two houses, Grasmere Road, for Mr. W. P. Ward ; shop and house, Church Lane, for Mr. H. Gibson : two houses, Stoney Bank Street, for Messrs. Wm. Rowbottom and Sons.

ROTHERHAM. *Houses.* The Corporation is to obtain tenders for the erection of 280 houses on the Eastwood estate. Plans passed : Estate development, off Brunswick Street, for Messrs. John Brown & Co., Ltd. ; two houses, Doncaster Road, for Messrs. S. Elmore and Sons ; two houses, Valley Road, for Mr. E. S. Allen ; six houses, Broom Lane, for Messrs. G. Bilton and Sons ; eight houses, Kimberworth High Street, for Mr. G. Lancaster ; warehouse, Effingham Street, for Messrs. E. Sergeantston, Ltd. ; two houses, Wortley Road, for Mr. E. Ogley ; eight houses, Ramsden Road, for Mr. R. Harrington ; house and business premises, Browning Road, for Mr. E. Havenland.

STRETFORD. *Works Extensions, Houses and Shops.* Plans passed : Ten shops and houses, club and office, Davyhulme Road, for Messrs. McLellan and Abel ; high power control house test cubicles, Westinghouse Road, for Met. Vickers Electrical Co., Ltd. ; works extensions, Elsinore Road, for Switchgear and Cowan, Ltd. ; works extensions, off Park Road, for Messrs. D. Anderson and Son, Ltd. ; 12 garages, off Talbot Road, for residential flats, Ltd. ; 35 houses, Lindum Avenue, for Messrs. Smith and Alcock ; 26 houses, Montrose Avenue, for Mr. H. Grimshaw ; 18 houses, Bradfield Road, for Messrs. Freeman, Evans & Co.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen ; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A₁	Aberdare ..	S. Wales & M.	1 5	1 0¾
A₁	Abergavenny ..	S. Wales & M.	1 5	1 0¾
A₃	Abingdon ..	S. Counties	1 4	1 0
A	Accrington ..	N.W. Counties	1 5½	1 1¼
A₃	Addlestone ..	S. Counties	1 4	1 0
A	Adlington ..	N.W. Counties	1 5½	1 1¼
A	Airdrie ..	Scotland	*1 5½	1 1¼
C	Aldeburgh ..	E. Counties	1 1½	10¼
A	Altrincham ..	N.W. Counties	1 5½	1 1¼
B₃	Appleby ..	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A₃	Atherstone ..	Mid. Counties	1 4	1 0
B₂	Aylesbury ..	S. Counties	1 2½	11
B₁	Banbury ..	S. Counties	1 3	11¼
B₁	Bangor ..	N.W. Counties	1 3	11¼
A₃	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley ..	Yorkshire	1 5½	1 1¼
B	Barnstaple ..	S.W. Counties	1 3½	11¾
A	Barrow ..	N.W. Counties	1 5½	1 1¼
A	Barry ..	S. Wales & M.	1 5½	1 1¼
B₁	Basingstoke ..	S.W. Counties	1 3	11¼
A₃	Bath	S.W. Counties	1 4	1 0
A	Batley ..	Yorkshire	1 5½	1 1¼
A₃	Bedford ..	E. Counties	1 4	1 0
A₂	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A₂	Bewdley ..	Mid Counties	1 4½	1 0½
B	Bicester ..	S. Counties	1 2	10½
	Birkenhead ..	N.W. Counties	*1 7	1 2¼
A	Birmingham ..	Mid. Counties	1 5½	1 1¼
A₁	Bishop Auckland	N E. Coast	1 5	1 0¾
A	Blackburn ..	N.W. Counties	1 5½	1 1¼
A	Blackpool ..	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B₂	Bognor ..	S. Counties	1 2½	11
A	Bolton ..	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A₃	Bournemouth ..	S Counties	1 4	1 0
B₂	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford ..	Yorkshire	1 5½	1 1¼
A₁	Brentwood ..	E. Counties	1 5	1 0¾
A	Bridgend ..	S. Wales & M.	1 5½	1 1¼
B₁	Bridgwater ..	S.W. Counties	1 3	11¼
A₁	Bridlington ..	Yorkshire	1 5	1 0¾
A	Brighouse ..	Yorkshire	1 5½	1 1¼
A₃	Brighton ..	S. Counties	1 4	1 0
A	Bristol ..	S.W. Counties	1 5	1 0¾
B₃	Brixham ..	S.W. Counties	1 2	10½
A₂	Bromsgrove ..	Mid. Counties	1 4½	1 0½
C	Bromyard ..	Mid. Counties	1 1½	10¼
A	Burnley ..	N.W. Counties	1 5½	1 1¼
A	Burslem ..	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton ..	N.W. Counties	1 5	1 0¾
A₂	Cambridge ..	E. Counties	1 4½	1 0½
B₂	Canterbury ..	S. Counties	1 2½	11
A	Cardiff ..	S. Wales & M.	1 5½	1 1¼
A	Carlisle ..	N.W. Counties	1 5½	1 1¼
B	Carmarthen ..	S. Wales & M.	1 3½	11¾
B	Carnarvon ..	N.W. Counties	1 3½	11¾
A	Carnforth ..	N.W. Counties	1 5½	1 1¼
A	Castleford ..	Yorkshire	1 5½	1 1¼
B	Chatham ..	S. Counties	1 3½	11¾
B	Chelmsford ..	E. Counties	1 3½	11¾
A₃	Cheltenham ..	S.W. Counties	1 4	1 0
A	Chester ..	N.W. Counties	1 5½	1 1¼
A	Chesterfield ..	Mid. Counties	1 5½	1 1¼
B₂	Chichester ..	S Counties	1 2½	11
A	Chorley ..	N.W. Counties	1 5½	1 1¼
B₂	Cirencester ..	S. Counties	1 2½	11
A	Clitheroe ..	N.W. Counties	1 5½	1 1¼
A	Clydebank ..	Scotland	1 5½	1 1¼
A	Coalville ..	Mid. Counties	1 5½	1 1¼
A₃	Colchester ..	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A₂	Colwyn Bay	N.W. Counties	1 4½	1 0½
A₁	Consett ..	N.E. Coast	1 5	1 0¾
A₂	Conway ..	N.W. Counties	1 4½	1 0½
A	Coventry ..	Mid. Counties	1 5½	1 1¼
A₂	Crewe ..	N.W. Counties	1 4½	1 0½
A	Cumberland ..	N.W. Counties	1 4	1 0
A	Darlington	N.E. Coast	1 5½	1 1¼
A	Darwen ..	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A₃	Denbigh ..	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury ..	Yorkshire	1 5½	1 1¼
B	Didcot ..	S. Counties	1 3½	11¾
A	Doncaster ..	Yorkshire	1 5½	1 1¼
B₂	Dorchester ..	S.W. Counties	1 2½	11
A₃	Driffield ..	Yorkshire.	1 4	1 0
A₂	Droitwich ..	Mid. Counties	1 4½	1 0½
A	Dudley ..	Mid. Counties	1 5½	1 1¼
A	Dundee ..	Scotland	1 5½	1 1¼
A	Durham ..	N.E. Coast	1 5½	1 1¼

			I s. d.	II s. d.
A	Eastbourne	S. Counties	1 4	1 0
A₁	Ebbw Vale ..	S. Wales & M.	1 5	1 0¾
A	Edinburgh ..	Scotland	1 5½	1 1¼
A₁	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A₂	Exeter ..	S.W. Counties	*1 4½	1 0½
B₁	Exmouth ..	S.W. Counties	1 3	11¼
A₃	Felixstowe	E. Counties	1 4	1 0
A₃	Filey	Yorkshire	1 4	1 0
A	Fleetwood ..	N.W. Counties	1 5½	1 1¼
B₂	Folkestone ..	S. Counties	1 2½	11
A	Frodsham ..	N.W. Counties	1 5½	1 1¼
B₂	Frome ..	S.W. Counties	1 2½	11
A	Gateshead	N.E. Coast	1 5½	1 1¼
B	Gillingham ..	S. Counties	1 3½	11¾
A₂	Gloucester ..	S.W. Counties	1 4½	1 0½
A₂	Goole	Yorkshire	1 4½	1 0½
A₃	Gosport ..	S. Counties	1 4	1 0
A₃	Grantham ..	Mid. Counties	1 4	1 0
A₁	Gravesend ..	S. Counties	1 5	1 0¾
A	Greenock ..	Scotland	*1 5½	1 1¼
A	Grimsby ..	Yorkshire	1 5½	1 1¼
B₁	Guildford ..	S. Counties	1 3	11¼
A	Halifax ..	Yorkshire	1 5½	1 1¼
A	Hanley ..	Mid. Counties	1 5½	1 1¼
A	Harrogate ..	Yorkshire	1 5½	1 1¼
A	Hartlepools ..	N.E. Coast	1 5½	1 1¼
B	Harwich ..	E. Counties	1 3½	11¾
B₂	Hastings ..	S. Counties	1 2½	11
A₃	Hatfield ..	S. Counties	1 4	1 0
B	Hereford ..	S.W. Counties	1 3½	11¾
A₃	Hertford ..	E. Counties	1 4	1 0
A	Heysham ..	N.W. Counties	1 5½	1 1¼
A	Howden ..	N.E. Coast	1 5½	1 1¼
A	Huddersfield ..	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	Ilkley ..	Yorkshire	1 5½	1 1¼
A	Immingham ..	Mid. Counties	1 5½	1 1¼
A₃	Ipswich ..	E. Counties	1 4	1 0
B₃	Isle of Wight ..	S. Counties	1 2	10½
A	Jarrow ..	N.E. Coast	1 5½	1 1¼
A	Keighley ..	Yorkshire	1 5½	1 1¼
B	Kendal ..	N.W. Counties	1 3½	11¾
B	Keswick ..	N.W. Counties	1 3½	11¾
A₂	Kettering ..	Mid. Counties	1 4½	1 0½
A₂	Kidderminster	Mid. Counties	1 4½	1 0½
B₂	King's Lynn ..	E. Counties	1 2½	11
A	Lancaster ..	N.W. Counties	1 5½	1 1¼
A₁	Leamington ..	Mid. Counties	1 5	1 0¾
A	Leeds ..	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester ..	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B₃	Lewes	S. Counties	1 2	10½
A₂	Lichfield ..	Mid. Counties	1 4½	1 0½
A	Lincoln ..	Mid. Counties	1 5½	1 1¼
	Liverpool ..	N.W. Counties	*1 7	1 2¼
A₂	Llandudno ..	N.W. Counties	1 4½	1 0½
A	Llanelly ..	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton ..	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A₃	Luton	E. Counties	1 4	1 0
A	Lytham ..	N.W. Counties	1 5½	1 1¼
A₁	Macclesfield	N.W Counties	1 5	1 0¾
B	Maidstone ..	S. Counties	1 3½	11¾
A₃	Malvern ..	Mid. Counties	1 4	1 0
A	Manchester ..	N.W. Counties	1 5½	1 1¼
A	Mansfield ..	Mid. Counties	1 5½	1 1¼
B₁	Margate ..	S. Counties	1 3	11¼
A₃	Matlock ..	Mid. Counties	1 4	1 0
A₁	Merthyr ..	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A₂	Middlewich ..	N.W. Counties	1 4½	1 0½
B₂	Minehead ..	S.W. Counties	1 2½	11
B₂	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe ..	N.W. Counties	1 5½	1 1¼
A₂	Nantwich ..	N.W. Counties	1 4½	1 0½
A₂	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson ..	N.W. Counties	1 5½	1 1¼
A	Newcastle ..	N.E. Coast	1 5½	1 1¼
A	Newport ..	S. Wales & M.	1 5½	1 1¼
A	Normanton ..	Yorkshire	1 5½	1 1¼

			I s. d.	II s. d.
A₁	Northampton ..	Mid. Counties	1 5	1 0¾
A	North Staffs. ..	Mid. Counties	1 5½	1 1¼
A	North Shields ..	N.E. Coast	1 5½	1 1¼
A₂	Norwich ..	E. Counties	1 4½	1 0½
A	Nottingham ..	Mid. Counties	1 5½	1 1¼
A	Nuneaton ..	Mid. Counties	1 5½	1 1¼
A₃	Oakham ..	Mid. Counties	1 4	1 0
A	Oldham ..	N.W. Counties	1 5½	1 1¼
A₃	Oswestry ..	N.W. Counties	1 4	1 0
A₂	Oxford ..	S. Counties	1 4½	1 0½
A	Paisley ..	Scotland	*1 5½	1 1¼
B₃	Pembroke ..	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A₂	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth ..	S.W. Counties	*1 5½	1 1¼
A	Pontefract ..	Yorkshire	1 5½	1 1¼
A₁	Pontypridd ..	S. Wales & M.	1 5	1 0¾
A₃	Portsmouth ..	S. Counties	1 4	1 0
A	Preston ..	N.W. Counties	1 5½	1 1¼
A	Queensferry	N.W. Counties	1 5½	1 1¼
A₂	Reading ..	S. Counties	1 4½	1 0½
B	Reigate ..	S. Counties	1 3½	11¾
A₃	Retford ..	Mid Counties	1 4	1 0
A₁	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A₃	Ripon	Yorkshire	1 4	1 0
A	Rochdale ..	N.W. Counties	1 5½	1 1¼
B	Rochester ..	S. Counties	1 3½	11¾
A₁	Ruabon ..	N.W. Counties	1 5	1 0¾
A	Rugby ..	Mid. Counties	1 5½	1 1¼
A₃	Rugeley ..	Mid. Counties	1 4	1 0
A	Runcorn ..	N.W. Counties	1 5½	1 1¼
A₂	St. Albans ..	E. Counties	1 4½	1 0½
A	St. Helens ..	N.W. Counties	1 5½	1 1¼
B₃	Salisbury ..	S.W. Counties	1 2	10½
A₁	Scarborough ..	Yorkshire	1 5	1 0¾
A	Scunthorpe ..	Mid. Counties	1 5½	1 1¼
A	Sheffield ..	Yorkshire	1 5½	1 1¼
A	Shipley ..	Yorkshire	1 5½	1 1¼
A₂	Shrewsbury ..	Mid. Counties	1 4½	1 0½
A₂	Skipton ..	Yorkshire	1 4½	1 0½
A₃	Slough ..	S. Counties	1 4	1 0
A₂	Solihull ..	Mid. Counties	1 4½	1 0½
A₂	Southampton	S. Counties	1 4½	1 0½
A₂	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport ..	N.W. Counties	1 5½	1 1¼
A	S. Shields ..	N.E. Coast	1 5½	1 1¼
A₂	Stafford ..	Mid. Counties	1 4½	1 0½
A	Stockport ..	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud ..	S.W. Counties	1 3½	11¾
A	Sunderland ..	N.E. Coast	1 5½	1 1¼
A	Swadlincote ..	Mid. Counties	1 5½	1 1¼
A	Swansea ..	S. Wales & M.	1 5½	1 1¼
A₃	Swindon ..	S.W. Counties	1 4	1 0
A₁	Tamworth ..	N.W. Counties	1 5	1 0¾
B	Taunton ..	S.W. Counties	1 3½	11¾
A	Teesside Dist....	N.E. Counties	1 5½	1 1¼
A₃	Teignmouth ..	S.W. Coast	1 4	1 0
A	Todmorden ..	Yorkshire	1 5½	1 1¼
A₁	Torquay ..	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall ..	Mid. Counties	1 5½	1¼
A	Tyne District ...	N. E. Coast	1 5½	1¼
A	Wakefield	Yorkshire	1 5½	1 1¼
A	Walsall ..	Mid. Counties	1 5½	1 1¼
A	Warrington ..	N.W. Counties	1 5½	1 1¼
A₁	Warwick ..	Mid. Counties	1 5	1 0¾
A₂	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A₂	Weston-s.-Mare	W. Counties	1 4½	1 0½
A₂	Whitby ..	Yorkshire	1 4½	1 0½
A	Widnes ..	N.W. Counties	1 5½	1 1¼
A	Wigan ..	N.W. Counties	1 5½	1 1¼
B₁	Winchester ..	S. Counties	1 3	11¼
A₃	Windsor ..	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A₂	Worcester ..	Mid. Counties	1 4½	1 0½
A	Worksop ..	Yorkshire	1 4	1 0
A₁	Wrexham ..	N.W. Counties	1 5	1 0¾
A₃	Wycombe ..	S. Counties	1 4	1 0
B₁	Yarmouth ..	E. Counties	1 3	11¼
B₁	Yeovil ..	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	,,		7	6
Building Sand	,,		7	9
Washed Sand	,,		8	9
2" Broken Brick	,,		8	3
¾" ,, ,,	,,		11	6
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	9	2	6
,, Wirecuts	,,	8	2	6
,, Brindles	,,	7	6	6
,, Bullnose	,,	9	14	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	8	8	0
Luton Facings	,,	8	0	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		19	0
,, ⅞"	,,	1	1	6
,, 1"	,,	1	3	6
,, 1¼"	,,	1	7	6
,, 1½"	,,	1	12	0
Deal matchings ½"	,,		14	0
,, ⅝"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1½"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1¼"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	,,	8	6
,, ,, ⅜"	,,	8	3
,, ,, ½"	,,	8	0
,, ,, ⅝"	,,	7	6
,, ,, ¾"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	,,	5	0	8	6
Boots	,,	3	3	4	5
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	1	0
,, drawn pipes	,,		18	0
,, soil pipe	,,	1	5	0
,, scrap	,,		13	6
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			10½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2⅞
,, ,, 26 oz. ,, ,, ,,	,,					3¾
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
¼" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

			£ s. d.
Digging over surface n/e 12" deep and cart away		Y.S.	2 9
,, to reduce levels n/e 5' 0" deep and cart away		Y.C.	8 6
,, to form basement n/e 5' 0" deep and cart away		,,	9 0
,, ,, 10' 0" deep and cart away		,,	9 6
,, ,, 15' 0" deep and cart away		,,	10 0
If in stiff clay	add	,,	2 6
If in underpinning	,,	,,	4 0
Digging, return, fill and ram	,,	,,	4 0
Planking and strutting to sides of excavation		F.S.	1 0
,, ,, to pier holes		,,	5
,, ,, to trenches		,,	5
,, ,, extra, only if left in		,,	3
Hardcore, filled in and rammed		Y.C.	10 0
Portland cement concrete in foundations (6-1)		,,	1 6 0
,, ,, ,, (4-2-1)		,,	1 12 6
,, ,, underpinning		,,	1 16 0
Finishing surface of concrete, spade face		Y.S.	7

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 6	2 3
Extra only for bends	Each	2 8	3 9
,, junctions		3 9	4 6
Gullies and grating	,,	16 6	18 0
Cast iron drains and laying and jointing	F.R.	4 9	6 9
Extra, only for bends	Each	10 6	15 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	28 10 0
,, ,, in cement	,,	29 15 0
,, Stocks in cement	,,	35 15 0
,, Blues in cement	,,	52 0 0
Extra only for circular on plan	,,	2 0 0
,, backing to masonry	,,	1 10 0
,, raising on old walls	,,	2 0 0
,, underpinning	,,	5 10 0
Fair Face and pointing internally	F.S.	1½
Extra over fletton brickwork for picked stock facings and pointing	,,	5½
,, ,, ,, red brick facings and pointing	,,	11
,, ,, ,, blue brick facings and pointing	,,	1 4
,, ,, ,, glazed brick facings and pointing	,,	3 6
Tuck pointing	,,	7
Weather pointing in cement	,,	3½
Slate dampcourse	,,	10
Vertical dampcourse	,,	1 1

ASPHALTER

		s. d.
¾" Horizontal dampcourse	Y.S.	4 6
¾" Vertical dampcourse	,,	6 9
¾" paving or flat	,,	4 0
1" paving or flat	,,	5 6
1" × 6" skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	17 9
Bath stone and do., all as last	,,	13 6
Artificial stone and do.	,,	13 0
York stone templates, fixed complete	,,	10 6
,, thresholds	,,	13 6
,, sills	,,	1 0 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3 10 0
Do., 18" × 9"	,,	3 7 0
Do., 24" × 12"	,,	3 17 0
Westmorland slating, laid with diminished courses	,,	6 0 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	,,	3 0 0
Do., all as last, but of machine-made tiles	,,	2 16 0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	,,	4 6 6
,, ,, ,, ,, ,, ,, (green)	,,	4 15 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 5 0
Shuttering to sides and soffits of beams	F.S.	8
,, to stanchions	,,	8
,, to staircases	,,	1 8
Fir and fixing in wall plates, lintols, etc.	F.C.	3 9
Fir framed in floors	,,	4 6
,, ,, roofs	,,	6 6
,, ,, trusses	,,	7 6
,, ,, partitions	,,	8 6
¾" deal sawn boarding and fixing to joists	Sqr.	1 14 6
1" ,, ,, ,, ,,	,,	1 17 6
1¼" ,, ,, ,, ,,	,,	2 3 0
¾" × 2" fir battening for Countess slating	,,	9 6
Do. for 4" gauge tiling	,,	12 0
Stout feather-edged tilting fillet	F.R.	4½
Patent inodorous felt, 1 ply	Y.S.	2 3
,, ,, ,, 2 ,,	,,	2 9
,, ,, ,, 3 ,,	,,	3 3
Stout herringbone strutting to 9" joists	F.R.	10½
1" deal gutter boards and bearers	F.S.	1 2
1½" ,, ,, ,, ,, ,,	,,	1 6
2" deal wrought rounded roll	F.R.	8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 2 6
1¼" do.	,,	2 12 6
1½" do.	,,	2 19 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 6
1¼" do.	,,	1 11

CARPENTER AND JOINER—*continued*

		s. d.
1½" deal moulded sashes of average size	F.S.	1 11
2" ,, ,,	,,	2 1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	3 9
2" ,, ,, ,,	,,	4 0
Extra only for moulded horns	Each	6
1½" deal four-panel square, both sides, door	F.S.	2 0
2" ,, ,, ,,	,,	2 8
1½" ,, but moulded both sides	,,	2 4
2" ,, ,, ,,	,,	3 0
4" × 3" deal, rebated and moulded frames	F.R.	1 2
4½" × 3½" ,, ,,	,,	1 8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1 9
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	2 6
1½" deal moulded wall strings	,,	2 1
1½" ,, outer strings	,,	2 4
Ends of treads and risers housed to string	Each	1 9
3" × 2" deal moulded handrail	F.R.	1 3
1" × 1" deal balusters and housing each end	Each	2 0
1½" × 1½" ,, ,,	,,	2 9
3" × 3" deal wrought framed newels	F.R.	1 3
Extra only for newel caps	Each	6 0
Do., pendants	,,	6 0

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.	15 6
Riveted plate or compound girders, and hoisting and fixing in position	,,	19 6
Do. stanchions with riveted caps and bases and do.	,,	19 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	,,	17 6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 10 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1 14 6
Do. in flashings		1 18 0
Do. in covering to turrets, etc.	,,	2 4 0
Do. in soakers	,,	1 10 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,, ,,	,,	4½

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	,,	6½	8	9	11	1	—
Boiler screws and unions	,,	3 3	3 9	5 0	8 0	—	—
Lead traps	,,	—	—	—	6 3	8 9	—
Screw down bib valves	,,	6 9	9 6	11 0	—	—	—
Do. stop cocks	,,	9 0	11 0	14 6	20 6	47 0	—

		s. d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1 0
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	2 9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 2
Extra, only for shoes	Each	1 3
Do. for plain heads	,,	5 6

PLASTERER AND TILING

		s. d.
Expanded metal lathing, small mesh	Y.S.	2 3
Do. in n/w to beams, stanchions, etc.	,,	3 6
Lathing with sawn laths to ceilings	,,	1 4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	1 9
Do. vertical	,,	2 3
Rough render on walls	,,	1 4
Render, float and set in lime and hair	,,	2 0
Render and set in Sirapite	,,	2 2
Render, backing in cement and sand, and set in Keene's cement	,,	3 1
Extra, only if on lathing	,,	4
Keene's cement, angle and arris	F.R.	6
Arris	,,	2
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1" girth	,,	1½
1" granolithic pavings	Y.S.	3 6
1½" ,,	,,	4 6
6" × 6" white glazed wall tiling and fixing on prepared screed	,,	17 6
9" × 3" ,, ,, ,, ,,	,,	1 2 6
Extra, only for small quadrant angle	F.R.	8

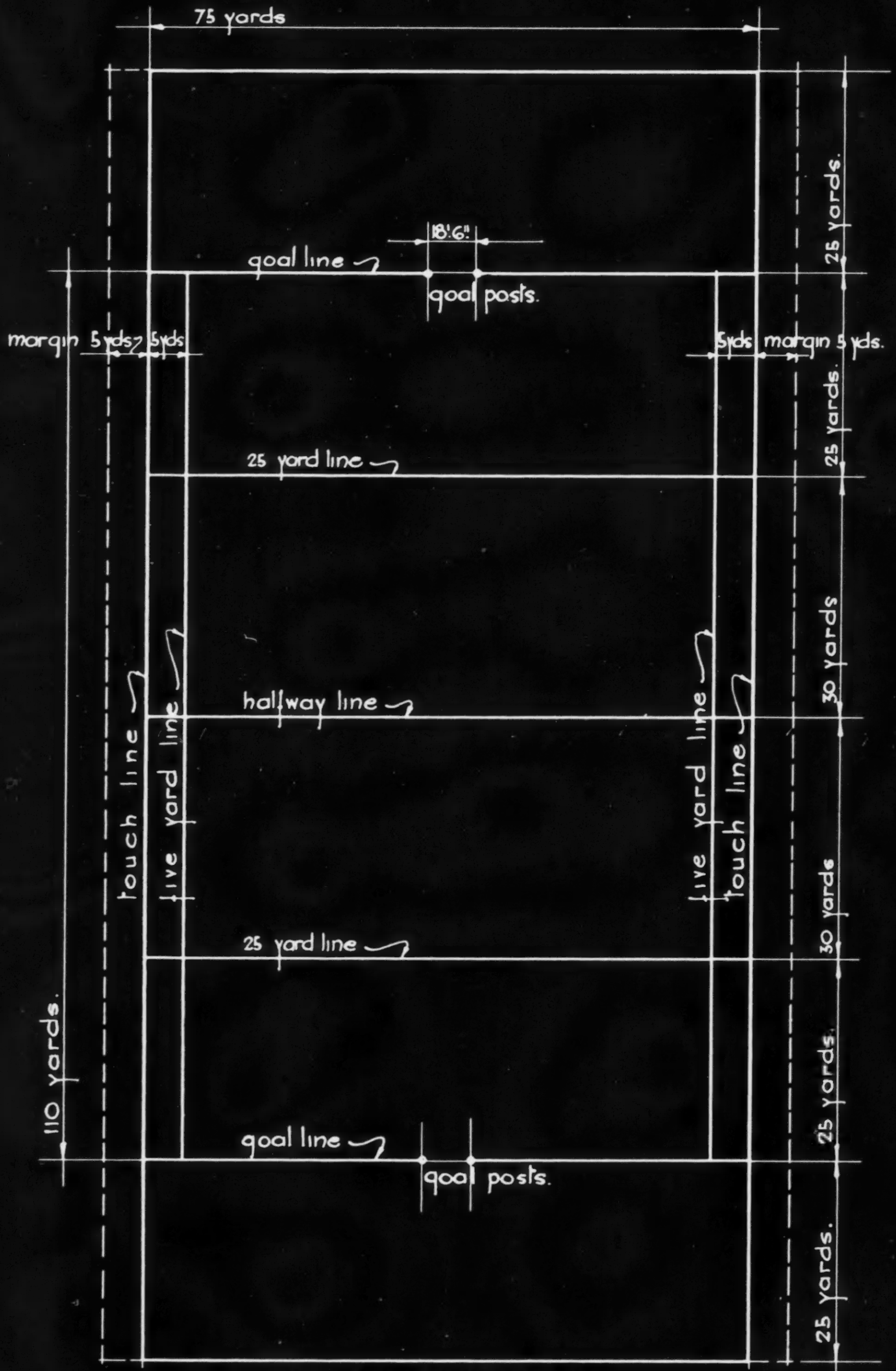
GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	7½
26 oz. do. and do.	,,	8½
Arctic glass and glazing with putty	,,	1 1
Cathedral glass and do.	,,	1 2
Glazing only, British polished plate	,,	7
Extra, only if in beads	,,	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	6½
Do. and distemper walls	,,	9
Do. with washable distemper	,,	1 1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 0
Hanging ordinary paper from	,,	2 9

goal posts : 18' 6" apart.
: 11' 0" high, minimum.
: cross bar 10' 0" from ground.


75 yards
18' 6"
goal line
goal posts.
margin 5 yds
5 yds
5 yds
margin 5 yds.
25 yards.
25 yard line
25 yards.
halfway line
30 yards
touch line
five yard line
five yard line
touch line
30 yards
25 yard line
110 yards.
25 yards.
goal line
goal posts.
25 yards.

PLAN OF RUGBY FIELD.
Scale. 60 feet to 1 inch.

INFORMATION SHEET: RUGBY FOOTBALL FIELD.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

• 47 •

LAY-OUT OF RUGBY FIELD

•

THIS week we publish the third and fourth of a series of Information Sheets devoted to the requirements of various games. The Sheets accompanying this issue show the lay-outs of Rugby and Association playing fields. The fifth and sixth of this series, giving the lay-out of Badminton Courts (singles and doubles) will be the next published.

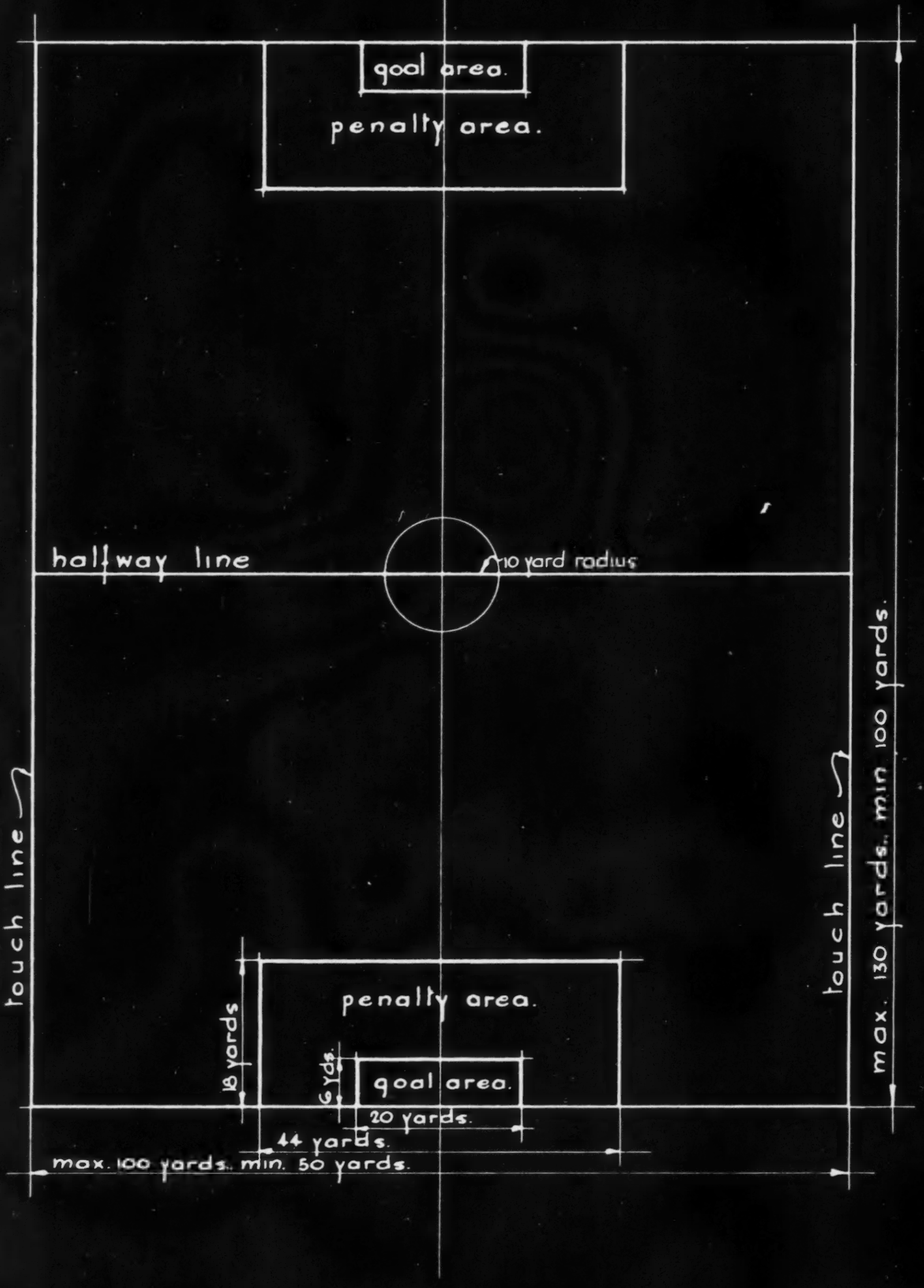
The following is a full list of the subjects previously issued :—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units : I.
13. Apr. 12—Lavatory Units : 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs : I.
23. June 29—Concrete Stairs : 2.
24. July 6—Pressed Steel Stairs : I.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs : 2.
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes : I.
30. Aug. 17—Lay-out of Wardrobes : 2.
31. Aug. 24—Common Sizes Miscellaneous.
32. Aug. 24—Electric Lighting : I.
33. Aug. 31—Electric Lighting : II.
34. Aug. 31—Electric Lighting : III.
35. Sept. 7—Electric Lighting : IV.
36. Sept. 7—Vacuum Cleaning Systems.
37. Sept. 14—Steelwork : I.
38. Sept. 14—Steelwork : II.
39. Sept. 21—Steelwork : III.
40. Sept. 21—L.C.C. Waivers : I.
41. Sept. 28—L.C.C. Waivers : II.
42. Sept. 28—L.C.C. Waivers : III.
43. Oct. 5—L.C.C. Waivers : IV.
44. Oct. 5—Phorpres Cellular Flettons.
45. Oct. 12—Lay-out of Hockey Field.
46. Oct. 12—Lay-out of Tennis Court.

International rules:
field of play..

maximum length.	130 yards.
maximum width	100 yards.
minimum length.	100 yards.
minimum width	50 yards.

Goal posts : spacing : 8 yards apart
: height : 8 feet to the underside of the rail


goal area.
penalty area.
halfway line
10 yard radius
touch line
touch line
max. 130 yards.. min 100 yards.
penalty area.
18 yards
6 yds.
goal area.
20 yards.
44 yards.
max. 100 yards.. min. 50 yards.

INFORMATION SHEET : ASSOCIATION FOOTBALL FIELD.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

• 48 •

LAY-OUT OF ASSOCIATION FIELD

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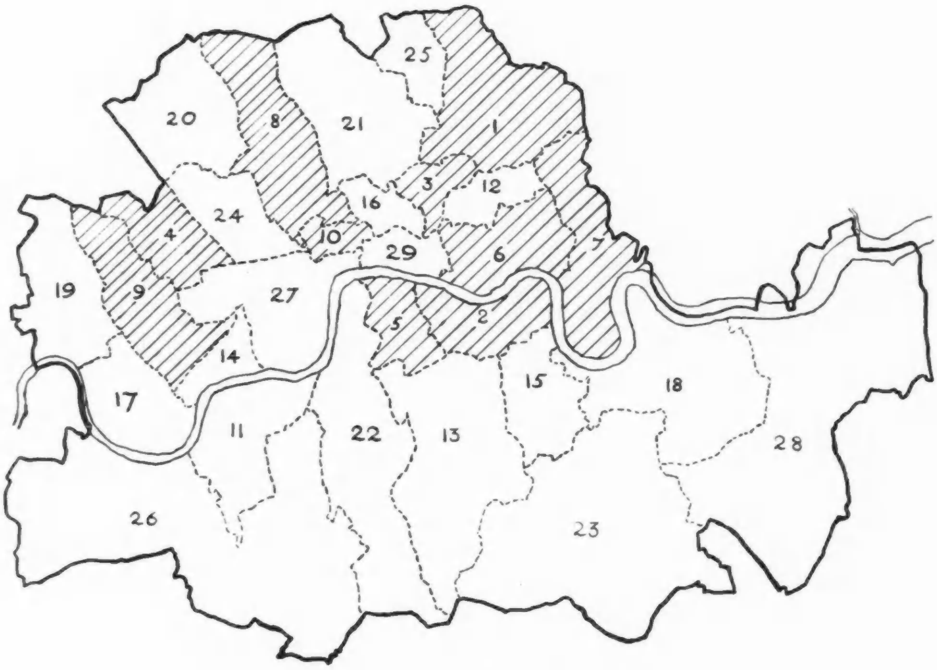
FOR a list of the Information Sheets previously issued, see the other Sheet accompanying this issue.

THE COUNTY OF LONDON

THE CITY AND THE TWENTY-EIGHT BOROUGHS



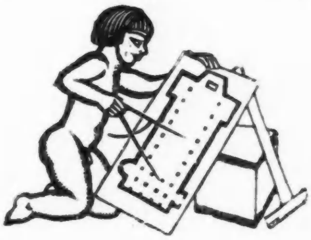
A Map of London showing the position of the City and the twenty-eight boroughs dealt with in this Survey. The ten boroughs hatched are discussed in detail on pages 513-543; and the necessary statistics for the calculation of the housing needs of the remaining eighteen boroughs and the City of London are set out in a table on pages 544-545. A complete summary of London appears on pages 546-547, followed by the summary and conclusions of the whole enquiry.

INDEX TO THE BOROUGHS

1. Hackney
2. Bermondsey
3. Shoreditch
4. Paddington
5. Southwark
6. Stepney
7. Poplar
8. St. Pancras
9. Kensington
10. Holborn
11. Battersea
12. Bethnal Green
13. Camberwell
14. Chelsea
15. Deptford
16. Finsbury
17. Fulham
18. Greenwich
19. Hammersmith
20. Hampstead
21. Islington
22. Lambeth
23. Lewisham
24. St. Marylebone
25. Stoke Newington
26. Wandsworth
27. Westminster
28. Woolwich
29. City of London

SLUM

Such scenes as this of sooty roofs, grey pavements and grimy back yards are typical of the surroundings in which millions of English workers have to live; with, overhead, a perpetual blanket of smoke and fog that prevents the penetration of sunlight or fresh air.



CONSTRUCTIVE AND DESTRUCTIVE EXPENDITURE

TO work for the "greatest good of the greatest possible number" is one of the simplest and most familiar definitions of the function of a civilized community. It appears a particularly apt one when we consider the paramount material problems that this country is now facing: the maintenance first of an adequate standard of living throughout the whole population (involving the elimination of mass unemployment), and then of the security of this standard of living by the prevention of war (involving the restoration of mutual confidence).

These problems must be faced by constructive encouragement to the nation to repair its outworn systems of living and working, rather than by effecting temporary retrenchments while hoping for better times. They are primarily problems of economics; and the immediate responsibility for our success or failure in facing them rests therefore with the Government's economic programme.

The present Government came into power as a result of the economic crisis of two years ago with a mandate for economy. At first its economies largely took the form of panic retrenchment in such constructive provinces as public works; but the Government, was fairly quick to appreciate the dangers of a negative economic policy and has clearly been trying to substitute for it a policy of careful expenditure for productive purposes, and one of the most encouraging signs of this is the present campaign for slum clearance. There are still, nevertheless, enormous sums spent in purely unproductive fields, of which we may instance as typical the huge annual expenditure on armaments.

It is not our purpose here to discuss the rights and wrongs of disarmament or the dangers of the armaments traffic; but it is worth pointing out that during the past five years the nation has spent on an average about £120,000,000 each year on armaments; the corresponding Exchequer expenditure on subsidized housing schemes being about £12,000,000.

There may be no economic relation between these two and it is not, of course, suggested that they are directly interchangeable, but they do provide a useful antithesis between expenditure which is, in the case of housing, productive, of lasting benefit in increasing the standard of living, and economically sound in that it reduces unemployment and therefore taxation; and expenditure which, in the case of armaments, is (in common with the "dole") economically unproductive and, of its own nature, liable to increase taxation; for the existence of extensive armaments tends to produce still more extensive armament, and, as Mr. Baldwin warned us in a recent speech: "If rearmament begins in Europe you may say good-bye to any restoration of cuts, to any reduction of taxation for a generation."

It cannot be, therefore, a just reflection of enlightened—or even of average—public opinion, when the budgetary estimates for the fighting forces remain many times greater than those for necessary and productive developments. Healthy living conditions are by far the most important problem of our time.

That the Government now realizes in which direction its duty lies is, as we have said, indicated in the launching of the Minister of Health's slum clearance programme. Further, that the Minister had the courage to speak the truth to the obstructive vested interests when he said at Southampton, "it will not, I imagine, be contended that a man is entitled to make a profit out of selling the use of bad houses any more than out of selling bad meat," suggests that he realizes that in this campaign he has the country behind him.

May we hope that he will continue to have the courage to harry the local government bodies out of their habitual half-hearted unhelpfulness and make the present campaign a real contribution to the problem.

At the moment the Minister's estimate is for the provision of about 210,000 houses for the rehousing of slum dwellers in cleared areas, spread over five years at a cost of £95,000,000. This may seem a small sum when, to renew our previous parallel, it is compared with the £600,000,000 spent in a similar period on the fighting services; yet it is a very definite advance on the 20,000 slum houses cleared in the past ten years.

When a comparison is possible between the final proposals of this programme and the actual housing needs of the population, we shall be able to see to what extent the problem is really being attacked and to what extent local authorities are capable of honest and disinterested co-operation. It should be emphasized, however, that within the next five years the number of families that need housing will increase and that the slum problem will consequently continue to exist until the rate of increase in building is greater than the rate of increase of families.

It rests with the Government as a whole, therefore, not only to back up Sir Hilton Young (as they no doubt have every intention of doing) in his attempt to substitute actions for resolutions, but to enlarge the scope of this campaign to include all similar national requirements embraced by a co-ordinated planning scheme. It is quite certain that public opinion will be unanimously behind them.

In this issue of the JOURNAL we publish the full results of our survey of housing requirements in London and the principal towns in the Kingdom. It must be clear from this how large the problem is and how urgent the undertaking of its solution.

The Architects' Journal
9 Queen Anne's Gate
Westminster, S.W.1
Telephone: Victoria
6 9 3 6
Telegrams:
Buildable
Parl.
London

NOTES & TOPICS

LO THE POOR INDIAN

I HAVE been allowed to see the advance proofs of this issue. They remind me of an afternoon spent with the grooms of the Jaipur polo team. After a certain game at Ranelagh I went over the stables where their ponies were kept. I found the Indian grooms were kept there too.

*

They prepared their food squatting in the stable yard, and at night they all slept together on the floor of a room whose sole furniture was a few horse rugs. "Poor devils," said my companion. After a moment he added, "But after all . . . they're only Indians . . ."

*

But were they such poor devils? It was clean and light and empty. By the standards of their own country it was just swell. And by ours? When one looks at Mr. Massey's figures the lot of the poor Indian seems positively happy. Not for him the miles of verminous walls, the filthy water-closets, the dark, tiny rooms filled with broken beds and decaying vegetation in the shape of mattresses and rotting chair upholstery.

*

This is the perquisite of the dominant white race.

*

It will be the privilege of the architect in the not-too-far future to sweep the slums of England away. I hope they are getting ready for it.

FIVE INTO ONE

Last week I was discussing the slum problem with the chaplain of a well-known London remand prison, and he told me a story about slum life.

*

Five families, he said, occupied one room, one in each corner and a fifth in the centre. They lived extremely happily for about twelve months, until the family occupying the centre part of the room decided to replenish their weekly income by taking in lodgers.

THE "OLDE WORLDE" EMPIRE

Within forty-eight hours I have met three architects who have just returned from holidays in Spain. One of them, approaching and leaving the country via Gibraltar, told me that Empire architecture was being brought up to date there.

*

An hotel that is built in the local manner of brick and is extending new wings of this material, is earnestly simulating a nice new concrete effect by an exterior coating of white cement, and balconies that prolong the horizontal lines of the elevation.

*

A more homely English touch is provided immediately opposite this "moderne" edifice by a small structure connected with a car park. This has a glazed tile roof and white plastered walls, with stained wooden slats inlaid to create the true old-world Tudor touch.

*

And this in a town that is rich in noble Georgian survivals. Incidentally, the guide book, with that peculiar architectural insight common to such arid publications, dismisses Gibraltar as a place "with narrow streets and unattractive houses built on an English plan unsuited to the climate. . . ."

*

Why do guide books always send you on fools' errands to see buildings not only unworthy of notice, but wholly

This being a special issue of THE ARCHITECTS' JOURNAL, *we are compelled to hold over the publication of our usual weekly features—Information Sheets, Letters from Readers, Trade Notes, etc. These will be resumed next week.*

unworthy of the tolerance that allows them to remain standing? How often have I been caught abroad by the solemn protestations of the guide-book writer, until I realized that, like some people nearer home, he thinks that everything old *must* for that reason alone be interesting and beautiful.

*

There is an opportunity for some architect who can write (and many architects are able to write lucidly and interestingly and well) to become the author of a real guide book to the architecture of different European countries.

BRITISH INDUSTRIES HOUSE

It appears that the project for taking over Gamage's Marble Arch building, and turning it into a sort of permanent British Industries Fair, is to go on.

Any scheme which stimulates British trade should find approval; but in this case, however much one approves the general idea, it is clear that there are many difficulties which will have to be conquered, or at least dodged.

*

Is the manufacturer, for instance, going to let the public into the mysteries of trade prices? Will the West End retailers welcome the public's realization that they pay the same price for their goods, to the wholesaler, as the cheap suburban shops?

*

As the answer to these two questions is obviously No! it becomes clear that the general public must be excluded.

*

It is accepted that any exhibition, to do well for itself, *must* be fairly crowded; otherwise the few visitors feel lost, and there is an absence of the gaiety and atmosphere which promotes "buying."

*

It will be interesting to watch the reactions of firms connected with the Building Trade. Will they, in any number, co-operate, or will they rest satisfied with their Building Centre activities? The Building Centre's great value lies in the fact that the public is made welcome and can see things for itself—an advantage that would appear to have to be denied to British Industries House.

CONTE DROLATIQUE

I have just heard a story about an architect. He is a famous architect; he is so *very* famous that I am quite prepared to wager that the story is true; he is so exquisitely famous that I dare not tell his name; but I can safely say that it is not of the Irish Republican Army that he is president.

*

Let us call him, for secrecy, Sir X. Y. He was at a dinner. It was so important a dinner that the table cloth had been specially woven for the occasion.

*

Half-way through the meal he had begun to draw with his pencil on this cloth—a bad habit common enough amongst architects; but Sir X.'s drawings are properly famous, and these were far better than those one usually sees on table cloths.

*

I'll warrant that, even after an R.I.B.A. banquet you wouldn't find a dozen sketches on the damask to compare with these; and even they would be of little interest, not being by Sir X. Y.

*

At the end of dinner Sir X. affectionately regarded his handiwork. Then he took out a little pair of scissors and cut the piece out of the table cloth.

*

"Here you are," he said to his next door neighbour—from whom this story comes.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, October 26

THE ARCHITECTURE CLUB. At the Architectural Association, 34–36, Bedford Square, W.C.1. "Unit" Architecture and "Unit" Furniture. Discussion to be opened by S. Chermayeff, F.R.I.B.A. Supper 7.30, Discussion 8.30 p.m.

INSTITUTION OF ELECTRICAL ENGINEERS. At the Institution, Savoy Place, Victoria Embankment, W.C.2. Inaugural address by P. V. Hunter, C.B.E., President. 6 p.m.

WORSHIPFUL COMPANY OF CARPENTERS. At the Carpenters' Hall, Throgmorton Avenue. "Modern Sanitary Systems." (Some comparisons with American practice.) By Henry H. Clay, F.R.SAN.I., F.I.S.E. 7.30 p.m.

SOCIETY OF ANTIQUARIES. At Burlington House. "The Wreck in the Hamble River." By R. C. Anderson. "Some Mediæval Jewels and Rings." By Dr. Philip Nelson, F.S.A. 8.30 p.m.

THE RUBICON. At 2, Leinster Gardens, W.2. "Some Aspects of Modern Art." By Frank Rutter. 8.15 for 8.30 p.m.

Friday, October 27

D.I.A. At the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1. "Modern Dutch Architecture" (with special reference to the recent visit of the D.I.A. to Holland). By F. R. Yerbury, HON.A.R.I.B.A., and Richard Taylor. 8.15 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS (Midland Counties Branch). *At the James Watt Memorial Institute, Birmingham.* Chairman's Address by E. L. Cotterell. 6.30 p.m.

Saturday, October 28

ARCHITECTURAL ASSOCIATION. At the Association's premises, 34–36, *Bedford Square*, W.C.1. Lectures on the Housing Problem: II. "The Solution for the City." By E. A. A. Rowse, A.R.I.B.A., A.M.T.P.I. 3 p.m.

Monday, October 30

INSTITUTION OF MECHANICAL ENGINEERS "Stainless Steels." By F. H. Murdoch. 6.45 p.m.

Tuesday, October 31

ARCHITECTURAL ASSOCIATION. At the Association's premises, 34–36, *Bedford Square*, W.C.1. Address by the President, C. Lovett Gill. 7.45 p.m. Annual Exhibition of Water Colours, Etchings, and other Drawings by Members. Opening day.

Wednesday, November 1

LIVERPOOL ARCHITECTURAL SOCIETY. "Revolution in the World of Appearance." By R. A. Duncan. 6 p.m.

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS. "Italian Mediæval Architecture. II." By Sir Banister Fletcher. 6 p.m

N E W S

STANDARDIZED BUILDING FOR MOSCOW

The reconstruction of Moscow (writes our special correspondent) entails the building, during the next ten to 15 years, of some 25 to 30 million cubic metres of new dwelling accommodation. To provide this enormous amount of space with present methods of building would be almost impossible, and it has therefore been decided to experiment with the building of standardized houses, the parts of which could be made in the factories.

Whereas under present conditions it takes a year to build a house, the assembling of standardized parts on the building site will only take a few weeks, and it is hoped thereby considerably to lower the cost of building.

The Supreme Council of Municipal Economy has allocated the Moscow Municipality 180,000 roubles for the preliminary work in connection with the scheme.

MANCHESTER SOCIETY OF ARCHITECTS

The following lectures have been arranged by the Manchester Society of Architects :

November 8 : Presidential address by J. R. Adamson, F.R.I.B.A. Also, exhibition of work by Bradshaw Gass and Hope. December 13 : "Housing, with special reference to slum clearance," by L. H. Keay, F.R.I.B.A. Also exhibition of the work of the Liverpool Housing Department. 1934—January 10 : "Landscape plans for the parish of Broadway, Worcestershire, past, present and proposed," by G. A. Jellicoe, A.R.I.B.A., A.I.L.A. Also, exhibition of the development plan and photographs of Broadway. February 14 : Public lecture, arranged jointly by the Royal Manchester Institution, the Builders' Federation and the Manchester Society of Architects ; "The Creative Spirit of the Crisis," by Erich Mendelsohn. Also, exhibition of the work of J. Henry Sellers. March 14 : Lecture by R. H. Wilenski. Also, exhibition of the work of Cruikshank and Seward.

A CO-OPERATIVE SCHEME FOR SMALL HOUSES

"The Architect and the Preservation of the Countryside" was the title of an address by Mr. G. Langley Taylor, F.R.I.B.A. M.T.P.I., chairman of the Buckingham Branch of the C.P.R.E., at a meeting of the Birmingham and Five Counties Architectural Association, held at Birmingham on October 20. Mr. William T. Benslyn, F.R.I.B.A. presided.

The lecturer referred to a co-operative scheme for the provision of small houses. He said he had put the scheme before the R.I.B.A. and it had received the sanction of the Executive Committee of that body. It was to be called the Buckinghamshire cheme of plans for small houses.

Mr. Taylor said that as approved, the scheme provided that architects should be invited to deposit plans of houses costing not more than £350 a house. The plans were to be working drawings, with sufficient half-inch details to enable the builder to erect the house, and were to contain full notes as to materials to be used to take the place of a specification.

Any applicant using the plans was to undertake to build the house in accordance with the details supplied, and to permit the architect concerned, or his nominee, to visit the house during the course of erection to see that the plans were being properly carried out. The plans were to be available for use by any applicant on payment of one guinea per house to cover the cost of one copy of the plan. A portfolio of plans was to be deposited in suitable centres within the area. The plans would bear no names, but would be numbered and a key to the authors would be kept.

The whole matter was to be dealt with on a co-operative basis, and any architect whose plan was included in the portfolio would share in the proceeds of the pooled fees. Thirty architects had submitted plans and several local councils had agreed to have portfolios in their offices.

FURTHER RELAPSE

The detailed unemployment figures recently issued give a clear indication that the decline in the larger types of constructional work is gathering momentum. The public works side of the industry is stagnant. On the building side only two trades mainly employed in the later stages of house erection show any considerable decline in unemployment, and that is more than compensated by increases in other trades. There is an increase in unemployment in every area except three, of which one is Northern Ireland, while it is significant that the largest increase recorded relates to the London area.

The figures give ample evidence of the need for some lead from the Government and Municipalities tending to the recommencement of the larger types of work if the industry is to maintain, next year, even that measure of improvement which this year was almost entirely due to the building of small houses.

Subscriptions to aid the Committee in its work in this connection should be addressed to the Hon. Treasurer, 5 Duke Street, Adelphi, W.C.2, and should be made payable to "The Special Committee for Public Relations."

LIVERPOOL ARCHITECTURAL SOCIETY

The 86th session of the Liverpool Architectural Society opened last Wednesday with a meeting in the Walker Art Gallery, where the R.I.B.A. prize drawings have been on exhibition, and an address by Mr. Leonard Barnish, president of the society for a second year.

Mr. Barnish urged that we should have more parkways and boulevards. Every building was served by a road and an architect should know the exact character of the road. Houses should not be allowed on speedways at all, and a speed limit of 15 m.p.h. should be imposed in streets in the business and shopping areas where possible. This problem affected amenity and the proper siting of buildings, and architects should press for a proper subjugation of what the motorist called his rights.

Discussing amenities, Mr. Barnish said the Liverpool Society now had two advisory panels to help local authorities in the control of elevations : one for West Lancs and the other for Wirral and West Cheshire. Though the system was not perfect, architects should do their best in the hope of helping to stem the dreadful flow of ugly buildings until a better method was devised.

Proposing a vote of thanks, Professor Patrick Abercrombie, who is Professor of Civic Design at Liverpool University, said the panel system had been somewhat doubtfully received by some architects. There was a danger that panels might find themselves doing the work architects should be doing professionally, and this had already happened in one or two places, though speculative builders could afford to pay for much better assistance in the production of their designs. It was a considerable weakness of the Town and Country Planning Act that it did not say under what guidance local authorities should control elevations, and the services of the Society's Wirral panel had been declined.

Sir Arnold Thornely seconded the vote of thanks.

WATERLOO BRIDGE

Plans for reconditioning and widening Waterloo Bridge and converting it into a four-carriage-way structure, with a 36 ft. roadway, were considered by the London County Council on Tuesday last.

The report of Improvements Committee stated : "We have, in active collaboration with the Royal Fine Art Commission, given detailed consideration to the question of securing the most suitable design, and we are now able to report that a design has been provisionally agreed upon.

"The governing consideration has been to ensure the least possible alteration in the appearance of the bridge consistent with the proposed increase in width.

"The method which we recommend, and which is favoured by the Commission, is technically known as a 'coved frieze' treatment, and its principal features are as follow : No alteration to the main lines of the bridge is involved, the piers, arches and waterways remaining as at present.

"The piers and the parapets over them at present project approximately five feet four inches beyond the main face of the bridge.

"It is necessary to advance the cornice and the parapet over the arches between the piers four feet three inches on each side to secure the widening of the roadway without altering the waterway, thereby converting what is now a three-carriage-way bridge (twenty-seven feet six inches roadway) into a four-way bridge (thirty-six feet roadway).

"To do this the cornice between the piers can be projected outwards upon a simple moulded frieze, and the balustrading can be set further out upon the cornice.

"By this means the 'breaks' formed by the piers from the water line to parapet top (which are such a valuable feature of Rennie's design) will be preserved. It will be, in fact, difficult, except where the corbelling abuts on to the piers, to realize that the bridge has been widened above the frieze level.

"The scheme proposed shows a reduction of approximately nine inches in the height of the parapet, thus giving a height of approximately four feet from the back pavement level to the level of the top of the parapet coping.

"This was considered necessary, having in mind the æsthetic as well as the practical points of view in the altered conditions. There are certain important matters of detail which will require further careful consideration, such as the junction of the reconstructed parapets with the existing Strand approach.

"The bridge being out of alignment both vertically and horizontally, the new cornice will probably need to be made to conform to the existing irregularities, subject only to minor adjustment in level here and there to reduce obvious discrepancies. Again, the treatment of surfaces, both of the existing granite when replaced *in situ* and of the necessary substitutes, will need discussion.

"On such matters the Commission desire to submit observations when working drawings are being prepared, and we propose to take advantage of this offer.

"The Minister of Transport concurs in the Council proceeding in accordance with the agreement reached with the Commission, on the understanding that the Council will continue to consult the Commission on such details as are mentioned above.

"The estimated cost of the reconditioning and widening scheme is £685,000, and the expenditure to be borne by the County Fund will be £274,000."

TOWN PLANNING INSTITUTE

A general meeting of the Town Planning Institute is to be held at Caxton Hall, Caxton Street, S.W.1, on November 10, when Mr. T. Alwyn Lloyd, F.R.I.B.A. will deliver his presidential address.

PHYSICS IN THE BUILDING INDUSTRY

The twentieth lecture in the Institute of Physics series, "Physics in Industry," is to be delivered by Dr. R. E. Stradling, the Director of the Building Research Station, on October 27, before the Manchester and District Local Section of the Institute of Physics, and again in London on November 1. This series of lectures was founded by the Institute to direct attention to the importance of industrial applications of physical science and to the value of the contributions to industry made by the researches of physicists. The subject of the twentieth lecture is "Physics in the Building Industry."

Sir George Washington Browne, who is retiring from the position of president of the Royal Scottish Academy.

RED CROSS BALL TABLEAU

We understand that Sir Edwin Lutyens is designing a tableau for the Red Cross Ball, to be held at the Dorchester Hotel, London, on November 14.

The tableau will illustrate the part the Red Cross plays in time of war and peace.

THE FUTURE OF DOMESTIC ARCHITECTURE

Under the auspices of the South Wales Institute of Architects (Central Branch) and the Institute of Builders (South Wales Branch) a lantern lecture on "The Future of English Domestic Architecture" was given by Mr. T. A. Darcy Braddell, F.R.I.B.A., at Cardiff on October 12.

The lecturer suggested that everybody engaged in the practice of domestic architecture today must be feeling very apprehensive about his work. A new thing called by some "Modernism," by others "Functionalism," and by the lecturer "Mechanism," was abroad stalking the land. Was this new thing a monstrous ogre or was it a radiant young child? The lecturer was of opinion that it was neither. His view was that it could be likened to the newly born, not very beautiful or even satisfactory at the moment, but hopeful of the future. It had been brought about by the advent of internationalism which, in its turn, could be accounted for entirely by the ease of the transmission of ideas made possible by modern inventions. Outside of the Far East everybody did the same thing, made the same thing and wanted the same thing. All young people were interested in machines. Mechanism and Internationalism were then virtually synonymous. Nationalism, in spite of Hitlerism and Fascism, was actually on its deathbed. How was this phenomenon likely to affect our houses? Throughout the nineteenth century fashions, not styles, were made because mankind, not realising the potentiality of the machines which he had first invented, was still thinking in terms of the ages when machinery as we understood it today, did not exist. The world had changed and the machine had come into its own. On this argument then it was reasonable to suppose that the English tradition in house building, of whatever period, would ultimately, possibly quite quickly, go altogether. But would it? Things had a queer way of happening in defiance of all logic.

A vote of thanks to the lecturer was proposed by Mr. E. A. Ward, F.I.O.B., Chairman of the Institute of Builders (South Wales Branch), seconded by Mr. T. Alwyn Lloyd, F.R.I.B.A., supported by Mr. W. S. Purchon, M.A., A.R.I.B.A.

Mr. J. Williamson, A.R.I.B.A., Chairman of the South Wales Institute of Architects (Central Branch), presided.

THE ART-WORKERS' GUILD

"Monuments, Worthy and Unworthy," was the subject of a paper read by Mr. Ernest Gillick at a meeting of the Art Workers' Guild, held on October 20. The Master (Sir Edwin Lutyens, R.A.) and Messrs. William McMillan, R.A., and Richard Garbe, A.R.A., contributed to the discussion.

D.I.A. VISIT TO WELWYN GARDEN CITY

Arrangements have been made for members of the Design and Industries Association to visit Welwyn Garden City on Saturday afternoon, October 28, in order to see the general plan of the City, its factories and houses, and the "Design for Today" House, the decoration and furnishing of which was carried out by Mrs. Cecil Tomley in consultation with the D.I.A.

The inclusive cost of the visit, including return train fare and lunch, is 5s. 8d. Members wishing to take part in the visit should communicate with the Secretary of the D.I.A., 6, Queen Square, W.C.1.

CONFERENCE ON HOUSING

A conference on housing, arranged by the London Trades Council, is to be held at Kingsway Hall, London, on Saturday next at 2.30 p.m. The speakers will include the Bishop of Kingston (representing the Archbishop of Canterbury); the Bishop of Stepney (representing the Bishop of London); Alfred G. Cunningham; Mrs. Eleanor Barton, J.P.; T. Barron, and the Rt. Hon. George Lansbury.

ANNOUNCEMENTS

Mr. I. Schultz, A.R.I.B.A., Chartered Architect and Surveyor, has removed his offices to 43, Clifton Gardens, W.9. (Telephone No.: Abercorn 1468). He will be pleased to receive manufacturers' catalogues.

The practice of Mr. Francis Hooper, F.R.I.B.A., has been merged into that carried on in the name of Belfrage, Saville and Hooper, by Mr. J. H. Belfrage, F.S.I., A.R.I.B.A., and Mr. Arnold F. Hooper, F.S.I., A.R.I.B.A. The newly constituted firm is now known as Hooper, Belfrage and Hooper. Mr. Francis Hooper will continue to be associated with the firm as consultant.

ARCHITECTURAL EXHIBITION IN LENINGRAD

An exhibition of architecture and town planning has been arranged in Leningrad. The exhibition is to show the historic process of the development of architecture up to the present day and is intended to be a practical help to architects in the designing and planning of dwelling-houses, municipal buildings and factories and other structures.

A special section of the exhibition is devoted to the provision of open green spaces in towns.

R. I. B. A.

THE OPENING DINNER

The opening dinner of the Autumn session of the Council will be held on Monday, November 12, at the Café Royal, Regent Street, W.1. It is anticipated that about 100 guests will be present.

THE NEW SESSION

The new Session which opens on November 6, will be marked by several features of exceptional interest.

The scheme for providing a new Headquarters for the R.I.B.A. in Portland Place is being pressed forward, and it is hoped that the new building, which has been designed by Mr. G. Grey Wornum, F.R.I.B.A., will be ready for occupation before the end of 1934—the Centenary year of the R.I.B.A.

The work of providing relief and, wherever possible, employment for unemployed architects is steadily developing.

Instead of the usual Conference of architects held at some interesting provincial centre there will be a special Conference in London—probably in October, 1934—in connection with the celebration of the Centenary of the R.I.B.A. and the opening of its new Headquarters.

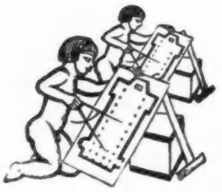
Sir Giles Gilbert Scott, R.A., the new President, will deliver his Inaugural Address at the opening meeting on November 6 and the portrait of Sir Raymond Unwin, his predecessor, painted by Sir George Clausen, R.A., will be unveiled.

On December 4 Mr. Charles Marriott will deliver an illustrated lecture on "Contemporary London Buildings," and the same evening the London Architecture Medal for 1932 will be presented to the designers of Lloyds Bank Headquarters, Lombard Street Elevation. (Sir John Burnet and Partners and Campbell Jones, Sons and Smithers).

The other sessional meetings (at 8 p.m. except where otherwise stated) are as follow :

Dec. 18, "New Materials and New Methods," by S. Chermayeff (F.). 1934 : Jan. 8, Award of Prizes and Studentships : criticism by G. Grey Wornum (F.) on works submitted for Prizes and Studentships. Jan. 22, 8.30 p.m., President's Address to Students and presentation of Medals and Prizes, 1934. Feb. 5, "Architectural Backgrounds in Italian Painting," by Kenneth Clark, M.A. (HON.A.). Feb. 19, Social Evening arranged by the Social Committee. Mar. 5, "Schemes for the Planning of London, Past and Present," by W. R. Davidge (F.). Mar. 19, "The Rebuilding of Imperial Rome," by Professor Dr. Guido Calza. April 9, 8.30 p.m., Presentation of the Royal Gold Medal. April 23, Social Evening arranged by the Social Committee. May 14, One Hundredth Annual General Meeting. May 28, "The Planning of Municipal Buildings," by Percy Thomas, O.B.E. (F.). June 18, Announcement of results of Annual Elections of Council and Standing Committees. Informal discussion on matters of professional interest.

COMPETITION



NEWS

LIMITED COMPETITION FOR HACKNEY TOWN HALL

We understand that Professor S. D. Adshead, F.R.I.B.A., the assessor in the limited competition for the proposed town hall at Hackney, has selected the following architects who are to be invited to submit designs :

C. Cowles-Voysey, F.R.I.B.A.
Lanchester and Lodge, FF.R.I.B.A.
C. H. James, F.R.I.B.A.
Robert Atkinson, F.R.I.B.A.
Louis de Soissons, F.R.I.B.A.
C. S. Joseph, A.R.I.B.A.

COMPETITION BARRED

The R.I.B.A. have issued the following statement : "Members of the Royal Institute of British Architects and of its Allied Societies must not take part in the competition for Winter Gardens and Swimming Pool, Ventnor, because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions."

HORNSEY TOWN HALL

The three premiated designs in the Hornsey competition are to be exhibited at the Building Centre, New Bond Street, W., for a fortnight from next Monday, October 30, between 10 a.m. and 6 p.m. (Saturdays, 10 a.m. to 1 p.m.).

Competitions Open

December 4.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. **Assessor :** Thomas S. Tait, F.R.I.B.A. **Premiums :** £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1. The conditions were reviewed in our issue for September 28.

December 15.—Sending-in Day. Messrs. Jenson and Nicholson invite designs for the decoration of a café-restaurant. Assessors : G. Grey Wornum, F.R.I.B.A. ; Louis de Soissons, F.R.I.B.A. : and G. Alan Fortescue, F.R.I.B.A. **Premiums** : 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1.

No date.—Mr. J. P. Turner, J.P., of Cardiff, invites architects and town planners to submit designs for the lay-out of a building estate of about seven acres at Penylan Hill, Cardiff. Assessor : Percy Thomas, O.B.E., F.R.I.B.A. Premiums : £100, £50 and £25. Conditions, etc., obtainable from E. Turner and Sons, Ltd. Penarth Road, Cardiff. Deposit £1 1s.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. **Assessor** : H. S. Goodhart-Rendel, F.R.I.B.A. **Premiums** : £150, £100 and £50. Conditions have not yet been drawn up.

Proposed Extensions to the Town Hall, Swindon. **Assessor :** Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

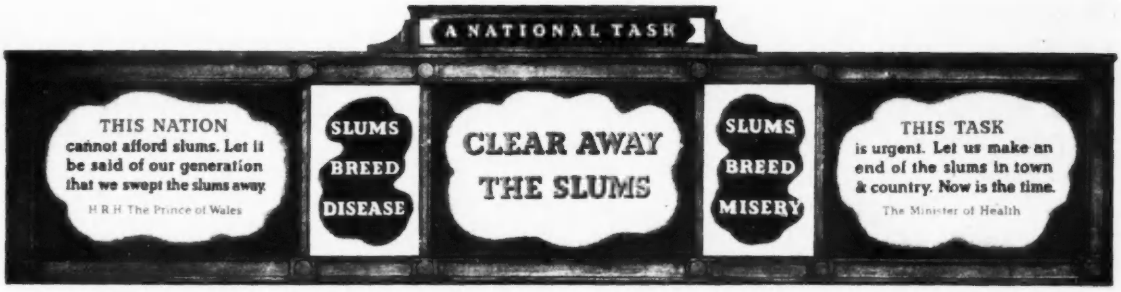
Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor : R. S. Wilshere A.R.I.B.A.

Proposed Town Hall and Municipal Buildings, Stoke Newington. Assessor : Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

THIS ARSHETECTURE

Middlesbrough Corporation's proposed slum clearance scheme, costing about £280,000, spread over five years, met with vigorous opposition at a public meeting, called by the Middlesbrough Property Owners' Association.

Mr. R. Gray mentioned the large sums already spent on housing in Middlesbrough and described the proposed slum clearance scheme as far too expensive a luxury. —*North Eastern Daily Gazette.*


A NATIONAL TASK
THIS NATION cannot afford slums. Let it be said of our generation that we swept the slums away
H R H The Prince of Wales
SLUMS BREED DISEASE
CLEAR AWAY THE SLUMS
SLUMS BREED MISERY
THIS TASK is urgent. Let us make an end of the slums in town & country. Now is the time.
The Minister of Health

The posters officially displayed throughout London during September.

FOREWORD

[BY THE EDITOR]

WE should like to make it clear that the investigation carried out for the purpose of preparing the survey contained in the following pages has not been undertaken by anyone whose interests lean in a particular direction.

In order to avoid personal bias we have put the enquiry in the hands of a qualified statistician—Mr. Philip H. Massey, head of the Massey Bureau (Economic and Political Information Service) whose job it has been to collect facts and figures and to draw deductions therefrom in as scientific a manner as possible.

In our issue for June 22 this year we published, with the object of giving, as far as available information would allow, the facts and figures from which a schematic diagnosis of the slum problem might be made, a survey of working-class living conditions in the six largest towns of Great Britain, London excluded. In subsequent issues we have made analyses of conditions in other important provincial cities. Now we turn our attention to London.

It should be remembered that the deductions of our surveys have been based on a standard that enables people to live one-and-a-half to a room. Such a standard cannot be regarded as ideal; but overcrowding in Great Britain is such that it is, at the moment, the highest at which we can reasonably aim.

The figures for new houses required, which are given on pages 548-549, show merely the amount of housing necessary to enable people to live round about this standard. The real housing problem—how to provide living conditions at less than one-and-a-half—*starts when all these houses have been built.*

The use of this standard, which is described and illustrated on page 511, makes it possible for the reader to compare one city with another and to arrive at a general conception of overcrowding and housing needs. No figures indicating the number of houses that should be pulled down are available, since officially no area is supposed to be unfit to live in unless scheduled for clearance by a medical officer of health.

The slum problem and the overcrowding or housing problem are treated officially as though they were separate questions. We repeat, they are not. It is true that as long as slum buildings stand, so long must people live in them, and so long will slums remain. But the slum will not disappear when every slum building is demolished. Overcrowding automatically produces slum conditions, and until the increase in the number of houses overtakes the increase in the number of families, new slums will spring up as fast as the old ones are pulled down.

[The Prime Minister to the Local Authorities]

The state of our slums and the large area covered by them are still a disgrace to all of us.

We are too much inclined to accept the existence of our surroundings. Passing slum property day after day makes no impression upon us at all. It becomes part and parcel of this weary life.

It is something we have inherited, something that has dug its roots deeply into our social system, that we take it as though it was as eternal as the hills themselves.

It is an essential moral and mental exercise—certainly a moral exercise—that occasionally we should draw ourselves away and look at these slum areas as though we were new arrivals from a different State, and pass judgment upon them as though we had never seen them before.

Successive Governments have not been indifferent to the slum problem. But Governments are very human, and against their will they have to pay attention to things of lesser importance than the slums because these things have been made the subject of great agitation. That is why slums still exist.

Let us form a fellowship to make these slums a memory and not an existing evil. And to succeed the first thing that has to be done is to bring home to local authorities and local communities their responsibility to back up the Minister of Health to carry on the programme of slum clearance.

FROM A SPEECH AT A LUNCHEON HELD IN LONDON.

LONDON SLUM

[BY PHILIP H. MASSEY]

B.Sc. (Econ.), F.R.Econ.S.

Author's Note. — Besides making my acknowledgments to the authors of the works enumerated in the bibliography on page 543, I should like to place on record my appreciation of the kindness shown to me, throughout my investigations, by officials of the authorities whose areas have been surveyed, and by several experts who have given me the benefit of their knowledge.—P. H. M.

DEFINITIONS

To avoid misapprehension of the terms used throughout the Survey in the pages that follow, these definitions, used in the Census, are given :—

" *PRIVATE FAMILY.*—Any person or group of persons included in a separate return as being in separate occupation of any premises or part of premises is treated as a separate family for Census purposes, lodgers being so treated only when returned as boarding separately and not otherwise. Private families comprise all such families with the exception of those enumerated in (i) institutions, or (ii) business establishments or boarding-houses in which the number of resident trade assistants or resident boarders exceeds the number of members of the employer's or householder's family (including private domestic servants).

" *STRUCTURALLY SEPARATE DWELLINGS.*—A structurally separate dwelling has been defined for the Census as any room or set of rooms, intended or used for habitation, having separate access either to the street or to a common landing or staircase. Thus each flat in a block of flats is a separate unit : a private house which has not been structurally subdivided is similarly a single unit whether occupied by one family or by several families. But where a private house has been subdivided into maisonnettes or portions, each having its front door opening on to the street or on to a common landing or staircase to which visitors have access, then each such portion is treated as a separate unit.

" *ROOMS.*—For the purpose of the Census, the rooms enumerated are the usual living rooms, including bedrooms and kitchens, but excluding sculleries, landings, lobbies, closets, bathrooms, or any warehouse, office, or shop rooms."

Note on the above Census definitions, and other definitions used in this Survey.

The term " structurally separate dwelling " is used in the Census to avoid the ambiguities of such words as " house " or " tenement."

" Tenement " is normally used of parts of a house inhabited by the working-class, but is sometimes used (not here) to give the meaning of " dwelling."

The parts of this memorandum which are derived from the Census follow the use of the term " structurally separate dwelling " —in other parts, e.g., in all the conclusions, " house " is used. The expression " so many *houses* " wanted is not to be taken to exclude the idea of flats or tenements.

It is necessary in many cases to rely on the context, and there does not appear to be any place where ambiguity could be alleged. For example, when an enquiry from " house to house " is being described and a house is found containing three or four families, it may safely be assumed that " house " is being used in the everyday sense of the word.

—P.H.M.

INTRODUCTION

SCOPE AND METHOD OF THE ENQUIRY, AS IT HAS SO FAR PROCEEDED

AT the beginning of this enquiry, a long introduction was given in which the method to be pursued was described in some detail.

The material which is presented in the survey of the slums of London, here shown, together with the information already obtained in respect of fourteen provincial cities, make it possible to arrive at an estimate of the total housing needs of Britain.

It may be well to recapitulate in part what was said at the beginning of the enquiry.[1]

In the case of each of the fourteen cities so far dealt with, a selection of figures from the 1931 Census has been given as a background to the description. The items taken from the Census have remained unchanged throughout, except as regards minor modifications made necessary by the slightly different methods used in the presentation of the English and Scottish Censuses.

After this official information, given under the headings " General Position," " The Wards," " Three Worst Wards on Persons Per Acre Standard " and " Three Worst Wards on Persons Per Room Standard " there has followed a brief description of certain aspects of housing in each city.

At the conclusion of each description an attempt has been made to measure the housing needs of the city, taking regard both of overcrowding and of unfit houses.

OVERCROWDING AND OVERCROWDING STANDARDS

So far as overcrowding is concerned, it has previously been pointed out that a number of standards exist, and that each has certain disadvantages as a measuring-rod of housing needs.

In the accompanying survey of the London slums less use has been made of these standards than was the case in dealing with the provincial cities. Moreover, where an overcrowding standard is used, it is also described at the same time. It is therefore unnecessary here to explain any standard other than that in common use—the Registrar General's.

On the Registrar General's Standard, which does not pretend to be a measurement of social needs, people living over 2 per room[2] are called overcrowded. This " standard " is merely a statistical measurement. Besides giving the number of persons living at over 2, the Census returns give the numbers living over 3, 3 and over 2, 2 and over 1½ and 1½ and over 1.

STANDARD USED FOR ESTIMATING HOUSING NEEDS IN RESPECT OF OVERCROWDING

For the purposes of this enquiry a standard of 1½ persons per room has been taken as representing the line between the overcrowded and the not overcrowded. The main defect of such a standard is that it makes no allowance for age and sex composition of families and may therefore inaccurately represent needs in respect of bedroom accommodation. But it is necessary to use a standard which can be applied to each city or borough considered, and this one can be so applied.

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[1] See THE ARCHITECTS' JOURNAL for June 22, 1933.

[2] All rooms are counted except bathrooms, sculleries, etc.—see Census definitions on this page. It appears necessary to mention once again that *children do not count as halves* on the Registrar General's Standard.

On the standard taken : —

1 person must have 1 room
2 must have 2
3 must have 2
4 must have 3
5 must have 4
6 must have 4
7 must have 5
and so on.

On the whole, it seems that the use of this standard is likely to under-estimate, rather than over-estimate, the number of rooms, and of houses, really needed.

A family of three is not deemed overcrowded if it possesses a two-room dwelling. Whatever may be the composition of such a family *either* all must sleep in one room, leaving, say, the kitchen-living room free at night *or* there will be no room free at night. It is obviously undesirable that any but very young children should sleep in the same room as their parents. Therefore the standard is not too generous for such families, while it will be too low a standard to take where one of the rooms is unfit for sleeping, being a kitchen proper, or where the family consists, say, of widow, son and daughter.

Similarly the use of the " not more than $1\frac{1}{2}$ per room " standard demands that four persons shall have three rooms. Where a family of four consists of man, wife and two small children the provision of three rooms will enable a room to be left free at night. Provided the two bedrooms are capable of holding two adults, the arrangement may be persisted in if the children are of the same sex. If they are not, the third room will also have to be used for sleeping. In that case, the standard cannot be looked on as over-generous.

Similar considerations may be seen to apply to a larger family. Six persons, for example, on the standard adopted, are not considered overcrowded in four rooms. Suppose a four-room house or flat of three bedrooms and kitchen-living room. Unless every room is to be occupied at night, there is only just provision for husband and wife to sleep together and for the children to be sex-separated. If there are three children of one sex and one of the other, *either*

three will have to sleep in one room
or one will have to sleep with parents
or the sexes will not be separated
or all rooms will be occupied at night.

From a consideration of these concrete

OPINIONS

RESOLUTION PASSED AT THE CONSERVATIVE ASSOCIATIONS' ANNUAL CONFERENCE (October 5).—" That this conference welcomes the declaration of the Government that it intends to wage an intensive war on the slums. It believes that the sustained support of public opinion is imperative if the total elimination of slums is to be achieved. It accordingly pledges itself to give full support to the Government in its efforts to solve one of the most pressing and important social problems of the present day."

THE BISHOP OF WINCHESTER.—Since the war great efforts have been made to solve the housing problem. But notwithstanding these great efforts overcrowding still continues, and the slums remain a menace to the health and well-being of the nation . . . It cannot be said too strongly and too frequently that a direct attack upon the slums will fail, unless at the same time a sufficient number of houses at a low rent is built for those who are not actually in the slums but who are living in dwellings which are overcrowded and deteriorating.

THE RT. HON. STANLEY BALDWIN, M.P.—It is an appalling thing to think that there are hundreds of thousands of people in this country who are condemned to live in conditions in which ill-health and discontent must be chronic. We cannot afford the moral and physical degradation that accompany our slum dwellings, and while I admit that this is, and must be, an age of economy, let us at least economize in our slums and have no more of them.

SIR E. D. SIMON.—There is only one solution of the slum problem, that is, to build decent new houses and to transfer the slum families to those houses.

E. GOODWIN ROWLINSON (DIRECTOR OF BACTERIOLOGICAL LABORATORIES, ROYAL INSTITUTE OF PUBLIC HEALTH).—We cannot afford to keep our slums. Our overcrowded areas are the happy hunting grounds of germs. There they thrive and multiply to their hearts' content. Among the germ population of the slums, pride of place must go to the tuberculosis germ. In 1931, 35,818 people died from this disease. Then there is diphtheria, which accounted for 50,000 deaths in the same year. It might also be pointed out that every case of diphtheria costs the country £35. I do not need to mention 'flu, which flourishes where there is overcrowding. There is no infectious disease that is not spread by slums. Pneumonia, meningitis, fevers and all the other ailments that are of verminous origin flourish where people are herded together.

THE RT. HON. GEORGE LANSBURY, M.P. : Let us rebuild homes to be let at rents that the present slum dweller can pay. I should like to see housing take the place of battleships and armaments, and homes built as a national service out of national funds and let at rents sufficient to pay for upkeep and repairs. Our homes are more needed and of infinitely better value than poison gas, warships and other weapons of destruction.

THE RT. HON. VISCOUNT HAILSHAM, K.C.—Whenever I see or hear anything of the condition of the slums, the overcrowded slums of London, I remember that the children of today are the citizens of the future, to whom of necessity we must trust to uphold the honour of this country, to maintain its prosperity and its greatness, and I wonder what chance we are giving to the children who are brought up under slum conditions to learn self respect or decency, to learn discipline or self-control, to achieve any sense of citizenship, or any sense of gratitude or obligation to the community to which they belong. If they fail hereafter might they not say that it was because we had failed too ?

THE RT. HON J. R. CLYNES.—Most of the slum dwellings in Great Britain are over a century old. They have not been destroyed—indeed, many slum areas have spread rapidly since Victorian days, until now they are veritable cancers eating out the health of the country.

SIR GEORGE NEWMAN (CHIEF MEDICAL OFFICER OF THE BOARD OF EDUCATION).—Infection and mortal disease has in the slum its supreme occasion, and there it reaps and sows. Until we can abolish the slum dwelling and the slum dweller, we cannot hope to establish securely the national credit of good health.

cases it seems that no overcrowding standard based merely on persons per room is satisfactory for application to individual cases.

A good standard to take would be as follows :—

One bedroom to be available for parents only.

One bedroom for boy or two boys.

One bedroom for girl or two girls.

One room free at night where family contains more than one child.

The demands of such a standard cannot be said to be extravagant. But the demands of such a standard would in the case of a great number of families be greater than on the $1\frac{1}{2}$ per room standard used here.

The $1\frac{1}{2}$ per room standard is therefore not one which demands luxury. In certain cases it may not guarantee decency. And that standard is the standard which shows one person in four living in overcrowded conditions in the cities so far examined.

METHOD USED FOR ESTIMATING TOTAL HOUSING NEEDS

Overcrowding, about which exact information in respect of the last Census date is known, is made the *basis* of the estimates of housing needs. From the figures of overcrowding at the various densities a fairly close estimate can be arrived at of the number of rooms required to bring everyone up to the minimum standard decided on.

Detailed investigation of Census figures of specimen areas has shown that those living at over 3 per room may be said on average to be living at 4, those living at 3 and over 2 at $2\frac{1}{2}$, those living at 2 and over $1\frac{1}{2}$ at $1\frac{3}{4}$.

On this basis, given the figures for any particular area, the following calculation of housing needs in respect of overcrowding may be undertaken :—

A people living at over 3 per room (assume average 4) have $\frac{1}{4}$A rooms. They should have $\frac{2}{3}$A, and therefore require $\frac{5}{12}$A in order that none shall live at over $1\frac{1}{2}$ per room.

B people living at 3 and over 2 (assume average $2\frac{1}{2}$) have $\frac{2}{5}$B rooms. They should have $\frac{2}{3}$B, and therefore require $\frac{4}{15}$B.

C people living at 2 and over $1\frac{1}{2}$ (assume average $1\frac{3}{4}$) have $\frac{4}{7}$C rooms. They should have $\frac{2}{3}$C, and therefore require $\frac{2}{21}$C.

In the estimates given in the previous part of the investigation, and here, symbols are not used. The total of rooms required by the different groups

PRESS OPINIONS

Slum clearance will not be a benefit to those alone who are provided with healthy homes instead of disease-ridden hovels ; with air and light and clean surroundings instead of closeness, dinginess and dirt. There will be a direct and immediate gain to the nation. Slums are costly in their depreciation of life and health. The reality and the weight of this toll are not in doubt. . . .

The Census of 1921 showed that nearly four times the number of people to be rehoused under the present programme lived more than two to a room. It does not follow, of course, that all these people lived or are now living in slums ; but it is probable that, if nothing else were to be done, a rate of clearance of between 40,000 and 50,000 slum houses a year would leave the broken vertebræ of the slum dragon still rather lively.—*The Times.*

To suggest that the end of the scandal of the slum is at last in sight may seem over-sanguine. That will depend entirely on whether the public conscience of the country remains sensitive to conditions which today disgrace it. There is every reason to believe it will. We are learning gradually the lesson of the new patriotism—that the first thing that should concern every Englishman about his country is the bodies and souls of its citizens.—*Spectator.*

All over England in most of the big towns, and perhaps to an even greater extent in middle-sized towns, there are whole areas where living conditions are so abominable that the only cure is the demolition of the houses.—*The Manchester Guardian.*

The slums in our cities are a national shame. They are the breeding ground of disease, discontent and despair. We should blow them up.—*The Daily Express.*

In London the question of the slums is admitted one of substantial proportions, but that is only the more reason why it should be tackled with courage and with vision.—*The Star.*

The housing shortage is being temporarily alleviated, but new houses soon grow old nowadays, and the problem will not disappear permanently until the slums have been replaced with houses.—*South London Press.*

It is a vivid illustration of just how bad general housing conditions are that the Registrar General accounts no family "overcrowded" if they possess one room, including a kitchen, to every two persons.—*Daily Herald.*

The Prime Minister set a finger yesterday upon a weakness of our democratic institutions when he lamented the tendency of Governments, "often against their will" to "pay attention to things which become a subject of great agitation or, apparently, great interest for a week," while problems of far more importance remain neglected. We should rather hesitate, however, to cite (as he did) as an example of this tendency the failure of successive Governments to deal effectively with the problem of the slums.—*Birmingham Post.*

The curse of slumdon is that it is like the rotten speck in an apple : it is a rottenness which spreads. If men and women are condemned (by their own misfortune, folly or vice) to live in slums, what hope is there for their children ? It is a miracle if boys and girls escape contamination if they have to live in squalid and overcrowded rooms ; and it is only through a heroic fight for self-respect, cleanliness, and decency that men and women avoid demoralization. We are sacrificing—destroying—manhood and womanhood when we compel people to live in pestilential slums because there are no decent houses to be obtained at rents which they can afford to pay. We ought to use the national credit to clear away the slums and build decent houses ; and we ought to get to work at once.—*The South Wales Argus.*

What is at stake in the matter is known to us all. War on the slums means at once the preservation of life and health, the conferring of decency and comfort on hundreds of thousands of hard-working women, and a great contribution to the solution of the unemployment problem.

Nothing would please our people better than to see the power of Government employed sternly and speedily to wipe out every slum in the land. We should applaud the Minister of Health if he took power to supersede any hesitant or defaulting local housing authority and cleared its slums away for it, imposing a special charge for doing so.—*Children's Newspaper.*

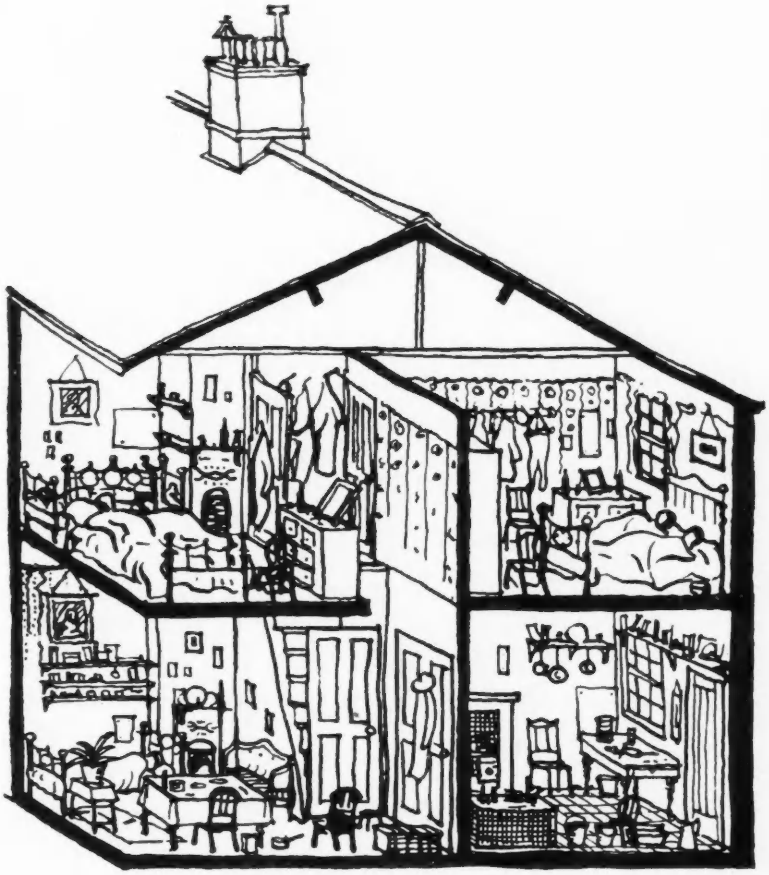
of people can therefore be seen. (Exact figures for persons living over 3, etc., as at 1931 Census date, are shown in order to facilitate comparisons and referring back.)

The above method appears to give a figure representing the number of rooms required in order that no one shall live at over 1½ per room. Allowance must be made, however, for the fact that it is impossible to house all families at precisely 1½ per room. Only families of three, six, nine, etc., can be so housed. By aggregating figures for persons overcrowded this factor is neglected. In practice, the majority of families will have to be housed at slightly less than 1½ per room in order that none shall live at more than 1½ per room. Where overcrowding in a house is abated by the rehousing of one or more families, it would frequently be necessary to leave the families who remained in the house at something under 1½ per room, as well as to rehouse the family or families displaced at under the standard.

These considerations show the necessity of adding to the total of rooms needed, obtained from the calculations from overcrowding figures, in order to arrive at a figure which represents the number of rooms that would have to be available in order that the standard should not be exceeded. So far as can be judged, a 25 per cent. addition seems reasonable. It is certainly not too great, because it takes no account of the necessity, which arises in practice, of providing accommodation for the as yet unborn. We cannot shift our rehoused families every time a child is born (or a member of the family dies), although on the strict mathematical standard such action is implied.

Besides allowing for the number of rooms required to abate overcrowding, it is necessary to take account of unfit houses. In the course of this enquiry, wherever possible, the number of unfit houses has been specially shown. But often this is not possible. The device has been adopted of taking the geometric mean between the number of rooms required to abate overcrowding (with the 25 per cent. added) and the total number of rooms which families now overcrowded should have (also raised by 25 per cent. for similar reason). This latter number, called the "maximum," would indicate the number of rooms required if every overcrowded dwelling were unfit; it assumes too that rooms not overcrowded are never unfit. It has been found that to take the geometric mean between the "minimum" and "maximum" gives fairly trustworthy results; the method tends to underestimate rather than overestimate the total housing needs.

OUR STANDARD



One-and-a-half to a room. This is the standard we have taken as a basis for comparison in the survey of the housing and slum clearance problem in fourteen provincial cities, published in the JOURNAL *during the past four months, and in the survey of London published in this issue. For the enlightenment of those who were unable to obtain copies of the first issue of the series—it went out of print within a few days of the publishing date—we reproduce above a drawing, illustrating our standard. We have given the inhabitants of this house larger and higher rooms than such inhabitants usually get.*

Even so, at one-and-a-half to a room—kitchens counting as rooms—there are six people in this house, divided for sleeping purposes thus: main bedroom, husband, wife and child; second bedroom, two girls; parlour, son.

Accommodation which necessitates five people sleeping in two small bedrooms, and one person in the parlour, is by every civilized standard odious. Nevertheless, today in England it is a standard of perfection. Of the eleven-and-a-half million people dealt with in our survey, one in four live in conditions of overcrowding, besides which this is luxury.

If one adds the presence of vermin—the bug, the beetle, the rat—the all-pervasive slum smell, and the absence—in thousands of cases—of bathrooms and w.c.'s, and even of water taps, one arrives at some idea of the living conditions of a quarter of the population as dealt with here.

This state of affairs has been brought about in spite of the organized opposition of the architectural profession. In many places—London, for instance, the percentage of persons living more than three-to-a-room actually increased between 1921 and 1931.

LONDON

In attempting an estimate of the needs of London, enquiry has been made along lines similar to those adopted for the provincial cities.

The problem has been dealt with by taking a sample of ten of the twenty-eight Metropolitan Boroughs, which, together with the City, make up the L.C.C. area ; the reasons for the selection of these boroughs are given below.

The items given at the beginning of the notes on each borough are almost the same as those given for the provincial cities. Acute overcrowding has been set out in greater detail, the persons per acre figures have been given less attention, while every ward showing an over all average over 1 person per room is mentioned, the figures for the worst three wards being set out in detail as heretofore.

Figures for the remaining eighteen boroughs and for the City of London are shown in the same way, though ward details are omitted.

With the whole picture in statistical terms and with ten of the boroughs dealt with in some detail, it has then been possible to estimate the housing needs of London.

Following this the results of the whole enquiry are concisely summarized and an attempt is made to estimate the housing needs of Britain.

Overcrowding and Infantile Mortality in the London Boroughs

In order to see the picture which the London boroughs present, the following tables have been prepared to show the position in 1931 as regards overcrowding and infantile mortality, and 1932 as regards infantile mortality.

Overcrowding and Infantile Mortality in 1931

The following table shows the Metropolitan Boroughs in order of " merit " for each of three standards. The dotted lines represent the averages for the whole of the Administrative County. All figures refer to 1931 (Census date or year).

Persons per Room		Percentage living over 2 per room		Infantile Mortality	
1. Shoreditch	1·45	Finsbury	29·4	Bethnal Green	88
2. Finsbury	1·42	Shoreditch	29·1	Paddington	87
3. Bethnal Green	1·35	Bethnal Green	23·6	Stepney	78
4. Stepney	1·33	Stepney	23·6	Poplar	77
5. Southwark	1·28	Bermondsey	21·8	Kensington	76
6. Bermondsey	1·25	Southwark	21·6	Shoreditch	75
7. Poplar	1·25	Poplar	20·1	Holborn	74
8. St. Pancras	1·13	St. Pancras	17·6	Westminster	74
9. Islington	1·12	Holborn	17·1	Fulham	68
10. Holborn	1·07	Islington	16·0	Hammersmith	68
11. Hammersmith	1·01	St. Marylebone	13·1	St. Pancras	67
12. Hackney	1·00	Kensington	12·6	Finsbury	66
13. Battersea	0·98	Paddington	12·3	St. Marylebone	66
14. Deptford	0·98	Battersea	11·9	Greenwich	65
15. Fulham	0·97	Greenwich	11·1	Islington	63
16. Lambeth	0·97	Deptford	11·0	Wandsworth	62
17. Camberwell	0·96	Lambeth	10·6	Hampstead	61
18. Greenwich	0·94	Fulham	10·5	Southwark	61
19. Paddington	0·90	Camberwell	10·4	Hackney	60
20. Stoke Newington	0·90	Chelsea	10·2	Lambeth	60
21. Woolwich	0·88	Hammersmith	10·2	Woolwich	59
22. Lewisham	0·81	Hackney	9·6	Battersea	57
23. St. Marylebone	0·81	Westminster	7·1	Bermondsey	57
24. Kensington	0·80	Stoke Newington	6·6	Camberwell	56
25. Chelsea	0·79	Woolwich	5·7	Stoke Newington	54
26. Wandsworth	0·79	Wandsworth	5·2	Deptford	53
27. Westminster	0·76	Hampstead	4·1	Lewisham	50
28. Hampstead	0·70	Lewisham	4·1	Chelsea	42

INFANTILE MORTALITY, 1932

Above London Average (66)		At or below London Average	
Paddington	107	Hammersmith	66
Kensington	98	Westminster	66
St. Marylebone	87	Camberwell	65
Finsbury	81	Deptford	65
Greenwich	80	Poplar	63
Shoreditch	80	Stepney	62
Holborn	72	Wandsworth	62
Southwark	72	Woolwich	60
Bethnal Green	69	Battersea	58
St. Pancras	69	Fulham	58
Islington	68	Bermondsey	56
		Lambeth	56
		Hackney	54
		Hampstead	54
		Lewisham	54
		Stoke Newington	53
		Chelsea	52

The Paddington figure has increased by 20, the Kensington figure by 22, the St. Marylebone figure by 21. These are the outstanding increases.

The list of boroughs to be dealt with in detail has been compiled in view of the facts as brought out in these tables, and with the intention of making the list as representative as possible. First, most of the boroughs showing general overcrowding at a high level have been taken. Secondly, boroughs known to have bad conditions in some parts, though the general averages for overcrowding are below average, have been included. It is to be noted that it is in the latter type of borough that the highest infantile mortality rates, and the greatest increases between 1931 and 1932, are found.

Following is the list of boroughs considered in detail :—

Shoreditch
Stepney
Southwark
Bermondsey
Poplar
St. Pancras
Holborn
Hackney
Paddington
Kensington

At least four others might well have been included, but it is hoped that the above list is as representative as possible. Bethnal Green, Finsbury, Islington and Lambeth are perhaps the most conspicuous absentees.

Speaking very broadly, Bethnal Green conditions are similar to those described in Shoreditch and Stepney. Finsbury is very like Holborn and St. Pancras in the west and Shoreditch in the east. The south-west of Islington is fairly well represented by St. Pancras, the south-east by Shoreditch. North Lambeth is very like North Southwark. Since all the main statistics are given for every borough, the housing needs of boroughs not dealt with fully are in no way neglected.

HACKNEY

GENERAL POSITION

Area		3,287 acres
Population	1921	222,142
	1931	215,333
Decennial decrease		6,809

1931	Persons per acre	65·5	
	Number of private families	59,143	
	Population in private families	208,728	
	Structurally separate dwellings occupied		34,155
	(vacant		408)
	Rooms occupied	208,779	
	Persons per room	1·00	

1921-31	Increase in occupied dwellings	660		or 1.97%
	Increase in number of private families	3,123		or 5.57%
	Families per occupied dwelling	1921	1.67	
		1931	1.73	
	Average size of private family	1921	3.86 persons	
		1931	3.53 persons	
	Average number of persons per room	1921	1.06	
		1931	1.00	
	Persons living more than 2 per room	1921	24,859 or 11.5%	
		1931	20,098 or 9.6%	
	(Families living more than 2 per room	1931	3,264 or 5.5%)	

1931	Persons living over 3 per room	4,715
	3 and over 2	15,383
	Total over 2	20,098
	2 and over 1½	31,231
	Total over 1½	51,329
	1½ and over 1	49,756

Acute Overcrowding

72 families living 6 or more in 1 room.
10 with 8 in 1.
None with 10 or more in 1.

99 families living 8 or more in 2 rooms.
9 with 10 or more in 2.
None with 12 or more in 2.

The number and proportion of persons living more than 3 per room increased during the period 1921 to 1931, the number by about 1,150, the proportion from 1·6% to 2·3%.

The Wards

Number of wards in the borough	8
Number of wards containing over all average of over 100 persons per acre	Nil
Number of wards containing over all average of over 80 persons per acre	3
Number of wards containing over all average of over 1 person per room	6
Number of wards containing over all average of over 1½ persons per room	Nil

Three Worst Wards on Persons Per Room Standard

	Homerton	Kingsland	South Hackney
Acreage	497	231	282
Population 1921 ..	35,478	22,716	22,561
,, 1931 ..	32,746	20,700	22,292
Persons per acre ..	65·9	89·6	79·0
Private families ..	8,657	6,247	5,972
Population in private families ..	31,543	20,354	21,726
Structurally separate dwellings occupied ..	5,116	3,032	3,372
Rooms occupied ..	27,955	18,873	20,205
Persons per room..	1·13	1·08	1·08

The three other wards with over all averages of over 1 person per room are :—

Clapton Park ..	1·06
Hackney	1·02
West Hackney ..	1·02

GENERAL NOTES

The borough is mainly residential, less mixed than the "immediate" East End, though the conversion of dwellings into factories and workshops is now increasingly important.

The north and west are, of course, the better parts, with Upper Clapton and Stamford Hill best.

Homerton and Hackney Wick are very bad.

Nisbet Street and Oswald Street and the areas surrounding are the worst parts; the Banister Street and Duncan Square areas are little better.

22,000 houses in the borough are 50-100 years old.

1,500 are more than 100 years old.

"Probably about 4,000 houses in the Borough could be described as being of very poor type, patched and worn, varying from houses that could be made fairly habitable by the expenditure of far more money than owners are likely to be induced to spend, to houses that could not be made decently habitable by any form of reconstruction."

(The Medical Officer of Health in his 1930 Report.)

In 1930 the Medical Officer of Health carried out the fullest official survey into housing conditions in a London borough which has ever been made.

Duncan Square Area

Represented as an Unhealthy Area by Dr. King Warry, then M.O.H., in 1900.

Represented by Dr. Dart, the present M.O.H., in 1929.

Included in L.C.C.'s provisional programme of 1930.

Description by Dr. Dart in 1930 :—

"The area, apart from one or two shops, workshops, stores and stabling, consists principally of small cottage-type properties, most of which are cramped on the land and

I see in the Government's Slum Clearance appeal the promise of successful achievement. I have received returns already that cover three-fifths of the population.

When I decided on the campaign, I decided that we must set before us as our goal the clearance in five years of some 200,000 houses, and the consequent rehousing of some millions of our fellow citizens.

I am glad to say that the estimate based on the returns already received shows that the goal should be attained and passed.

The estimated totals from these returns received provide for the clearance of 210,000 houses, and the rehousing of about 1,050,000 people in five years. That is a very big effort.

The cost will represent a total capital outlay in five years of £95,000,000, or £19,000,000 a year.

—SIR EDWARD HILTON YOUNG (Minister of Health) at the Conservative Associations' Conference (October 5 last).

so ill-arranged and congested as to prevent free circulation of air. The narrowness of the streets and closeness of the houses one to another has resulted in great congestion and a consequent general deficiency of air-space—especially back air-space. The general arrangement of the buildings and streets is bad, the former are mostly arranged in small square blocks, the majority having a tiny confined yard, backing on or adjacent to its neighbour; this arrangement transforming these tiny yards into confined closed-in 'pockets' where the free movement of air is seriously hampered. Back air-space to individual houses varies, but generally is very deficient—some of the houses have no back yard and no back windows, and in these instances back air-space is entirely absent; others have back yards a mere 3 feet 6 inches deep.

. . . . . .

"The streets vary in width from 20 feet to 8 feet, and within the area are three culs-de-sac, the only open thoroughfares being Duncan Road and Sheep Lane.

"In many instances the closeness of the adjacent buildings and rear walls of the houses render the ground floor back rooms dark and unwholesome, and in the case of the houses with very restricted yard space, and those in the 8 feet cul-de-sac, proximity of the water-closets and dustbins to the doors and windows, coupled with the absence of the normal air circulation, sometimes gives rise to foul smells in the houses, especially in hot, damp weather."

No steps had been taken to deal with this area by the end of 1932.

Warburton Square Area

Represented in 1929.

Included in L.C.C.'s provisional programme of 1930.

Description by Dr. Dart in 1930 :—

"This is a small residential area in the centre of an industrial district. . . . . . .

"The low levels of yards and closeness of buildings and walls in the rear of the houses in many instances render the lowest back rooms dark and unwholesome, especially so where these rooms are basements averaging 5 to 7 feet below the adjoining street level. In many cases where the back yards are low and yard space greatly restricted, the proximity of the w.c. and the dustbin frequently causes foul smells in the houses, especially on days when the atmosphere is warm and moist.

"The insanitary state of the area arises from the conditions mentioned above, the most important being the closeness of the buildings to each other, the bad arrangement and planning, the narrowness and bad formation of the streets, difference of levels of streets and back yards, heights of surrounding buildings, all these factors making the area generally cramped, deficient in ventilation and air space, and excluding a large amount of sunshine, especially from the very centre of the area."

No steps had been taken to deal with this area by the end of 1932.

Morning Lane Area

Represented in 1929.

Included in L.C.C.'s provisional programme of 1930.

Description by Dr. Dart in 1930 :—

" . . . contains dwelling houses, factory premises, workshops and stores, shop property and stables.

"The streets, with the exception of the main thoroughfare, Morning Lane, are narrow, varying in width from 14 feet 3 inches to just over 20 feet.

"The properties as a whole have been indifferently maintained and are generally in a bad state of structural repair, many being entirely worn out. . . . . . .

"The remainder of the area (other than Morning Lane) consists mainly of small cottage type properties, and with one exception, have frontages to the public streets. The condition of the houses generally is old, and many are in a worn-out condition or rapidly approaching this state. The majority were built before it was considered necessary to cover a building site with concrete, or to provide damp-proof courses in the walls; some have ground floors below the level of the adjoining street or yard, whilst others originally at the same level have sunk below; all these factors contributing towards damp and unhealthy living conditions in the houses. A large number of the houses are of an old, badly-planned type, with the front doors opening directly from the public footpath into the living room and bedroom, and with staircases leading out of, and passing through, the rooms; these possess no through ventilation except via the yard door; some have cramped and restricted upper back rooms where sloping ceilings give a height of less than 5 feet between floor and ceiling, with a small window having a superficial area considerably below the minimum required for all habitable rooms in new buildings; and as a result of these conditions, the rooms must necessarily be very unhealthy for sleeping apartments, for which purpose they are generally used. In other instances passages and staircases are so narrow that a person of average size has to proceed sideways to gain free passage.

"A great number of the houses have no sinks, and water supplies in these cases are obtained from a tapped stand-pipe in the yard. One old cottage in the area has in the process of time become so surrounded by other properties that it has no direct access to or from any public thoroughfare, and approach is only possible by entering and passing through another house. Many houses in this area have been built on gardens formerly belonging to other houses. I may add that the practice of building workshops and so forth on gardens belonging to houses is becoming a usual practice in Hackney, and is a highly objectionable proceeding in many instances.

. . . . . .

"A peculiar feature of this area is the large amount of irregular employment and poorly-paid class of worker occupying the houses; also the fact that many of the adults are chronic invalids."

No steps had been taken to deal with this area by the end of 1932.

Northwold Road Area

Represented in 1929.

Included in L.C.C.'s provisional programme of 1930.

Description by Dr. Dart in 1930 :—

"The streets vary in width from 12 feet to 50 feet, and there are 5 culs-de-sac, either open courts or narrow passageways—the widths of which vary between 3 feet 9 inches to 22 feet—providing access to groups of cottages.

. . . . . .

". . . Probably the age of most of the properties is approximately 150 years, and there is no question but that all the dwellings present definite and unmistakable signs of structural deterioration due to the effects of age and wear over a very long period of years, and quite apart from this consideration, there are many permanent sanitary defects. Most of the dwellings possess bad planning features of some kind or another, in most cases entry being direct from the street into the living room and with dark, winding staircases opening out of such rooms, or from small cramped lobbies rising through the middle of the house between the front and back rooms where it is not possible to obtain by normal means, any sort of natural lighting or ventilation. There are houses where the floor is below street level and where one steps down into the house directly off the public footpath; there are a number of dwellings of the single-back type where no windows are provided at the rear above the ground floor, and these dwellings obtain only very poor ventilation on the ground floor level, and many have small, cramped and low rooms averaging between 6 feet and 7 feet in height.

"Included in this area are two back-to-back cottages and sixteen single-storey two-roomed cottages, which are extremely aged and dilapidated.

"The smaller dwellings, especially, possess only a bare minimum of domestic comfort or convenience. It can be definitely stated that practically every dwelling is damp, and many seriously so.

"Reviewing the condition of the properties as a whole, the area is composed of extremely aged, damp and worn-out dwellings, many of which are badly designed as regards internal arrangement; and by the process of superficial 'patching'—both externally and internally—have received prolongation far beyond their normal term of effective life."

No steps had been taken to deal with this area by the end of 1932.

But the Borough Council asked the L.C.C., towards the close of the year, when they proposed to start on their clearance work in this area and the three above, in due course receiving intimation that a beginning would be made in this particular area.

In 1930 the Borough Council agreed to deal with the following 14 areas as Clearance Areas :—

Abbot Street
Banister Street
Berkshire Road
Broadway
Clarence Terrace
East Street
Elsdale Street
Fulham Place
High Hill Ferry
Middlesex Wharf
Nisbet Street
Otley Terrace
Pear Tree Court
Queen's Court

Not all of these areas have been officially represented—there is a danger in "representing" when there is little hope of action being taken—a danger wisely avoided here.

Extracts from the full description of each of these areas in the same form as those given above in regard to the 4 areas scheduled by the L.C.C., would be illuminating, but space does not permit.

Extracts from the descriptions of two of these areas must suffice :—

Banister Street Area

"... situated in one of the poorest and oldest parts of the borough, and, as to be expected from its situation, embraces some very old property, Heywood Buildings possibly being approximately 300 years old. . . . These 'buildings' are a block of cottages, each of two floors. The cottages, individually, possess no sanitary or other domestic conveniences, and have no drainage. Local verbal history claims that the structure was originally a cowshed. In addition to the absence of all sanitary conveniences, the only provision for cooking or artificial lighting is the open fire, oil or candles. There is one communal water supply and wash-copper, which is situated in the communal wash-house, where the dustbins are also kept. The water-closet accommodation is situate on the opposite side of the narrow street. The cottages have no yards, and the public thoroughfare is normally used as a drying ground. The internal planning is extremely bad; floors are below ground level; there are no back windows, and a total absence of through ventilation, which is aggravated by the cramped, shut-in, and overshadowed nature of the site; these factors definitely producing bad living conditions. This structure is weak, decayed and worn out; a damp-proof course has at some time or other been inserted in part of the main front wall, probably when the walls were condemned as dangerous structures and rebuilt."

An enquiry was held into the Banister Street Area, which was enlarged in order to secure a site suitable for re-housing well over 1,000 persons, in 1932.

Bones Cottages in the Nisbet Street area, Hackney, consist of two extremely aged cottages built in an enclosed court, access to which is from a narrow opening between Nos. 6 and 7 Crozier Terrace. Both of these dwellings are of the single-back type, and possess no means of through ventilation and no sort of modern domestic convenience, the occupants being required to use the open fire for cooking and oil or candles for lighting, as gas or electricity are not laid on. There is a communal wash-house, water-closet and water supply. The cottages are deficient in natural light and ventilation, and the structures themselves are extremely aged and damp.—From the report of the M.O.H., Hackney (1930).

The Minister decided not to confirm Order No. 3. This action reduced the re-housing capacity of the sites from well over 1,000 persons to less than 500.

The smaller areas, unsuitable for re-housing, are, therefore, unlikely to be cleared for a longer period than would otherwise have been necessary.

The Council has, however, acquired some of the houses in respect of which demolition under the Clearance Scheme was not permitted, and the scheme as it now stands will eventually provide for re-housing 810 persons.

Middlesex Wharf Area

"A somewhat scattered area, consisting of short terraces and semi-detached two-storey cottages.

"All these dwellings are built on low-lying land which is subject to periodical flooding from the River Lee close by. The houses are estimated to be approximately 90 to 100 years old, and structurally they show marked effects of age and are obviously worn out. They possess one great advantage in the free air space and open surroundings of the neighbourhood.

"Some of the houses, however, are single-back type and have no means of through ventilation, whilst a number are very badly planned, the entrance door opening direct into the living room, rooms directly intercommunicating, staircases leading out of the living rooms or up the centre of the house and lacking in direct means of natural lighting and ventilation.

"Despite the low natural level of the site, in some instances the floor level is even below the adjoining outside ground level, and as to be expected in view of the age of the structures, no precautionary measures such as the provision of concrete over the building site, or damp-proof courses were taken initially against the possibility of flooding and its consequences, nor against the normal effect of rising dampness.

"As far back as July, 1918, the majority of these houses were in such a condition that the Borough Council made 'Closing Orders' (under Section 17 of the Housing and Town Planning Act, 1909) in respect of them. These 'Closing Orders,' however, were prevented from coming into operation by the Ministry of Health. The Ministry considered it undesirable for the Borough Council to take any further steps towards making these 'Closing Orders' operative in view of the acute shortage of alternative housing accommodation available in the borough at that time."

OVERCROWDING

The usual factors :

1. Inability to pay more rent.
2. Necessity to live near work.
3. Increasing industrialization.

Special action was taken in 1930 about this.

"Complaint was made by a woman that the rooms in her occupation were overcrowded. The family consisted of the man, his wife and four children (boys, aged 10 and 4 years, and girls, aged 11 and 7 years).

"They occupied two basement rooms, the back room, which was quite unsuitable for use as a bedroom, being used for living purposes, whilst the entire family slept in the front room. . . .

"The mother stated that indecent behaviour had occurred between the two eldest children owing to her inability to make separate sleeping arrangements."

WORK OF THE BOROUGH COUNCIL

Since the war the Borough Council has built some 430 houses and flats (to end of 1932).

The difficulties caused in this borough by the actions of the L.C.C. and the Ministry have already been touched upon. The work of the Council has also been held up in respect of the Lower Clapton Road scheme, which will provide accommodation for 880 persons.

It has now been decided to use these flats for rehousing those displaced from the Banister Street area, but it is likely that the flats will be too expensive for 50% of the inhabitants of that area, who will seek "other accommodation."

CONCLUSION

In attempting a plan of rehousing the same consideration must be borne in mind in the case of Hackney as in other boroughs. If large-scale clearance is adopted in the worst areas, there will be opportunity to erect block flats, so relieving overcrowding in other parts of the borough, and making reconditioning of these practicable.

The Council has well recognized this, and has been prevented from carrying out ideas in accordance with these principles.

Meanwhile the areas described above become a little older, a little more filthy, more and more underground rooms are used for living and sleeping.

4,715 people living over 3 per room (assume average 4) have 1,180 rooms. They should have 3,140 and therefore require nearly 2,000 more.

15,383 people living 3 and over 2 (assume average 2½) have 6,150 rooms. They should have 10,250 and therefore require 4,100 more.

31,231 people living 2 and over 1½ (assume average 1¾) have 17,850 rooms. They should have 20,820 and therefore require nearly 3,000 more.

On this basis, minimum needs are 9,000 rooms.

If all the overcrowded houses were unfit, 34,200 rooms would be required. Adding 25% to allow for the impossibility of housing all families at precisely 1½ per room gives 11,250 and 42,750.

The housing needs, calculated in the usual way, are about 21,750 rooms, or say 5,500 houses.

In view of the Medical Officer's opinion that 4,000 houses are of "very poor type," etc. (see above) and that many of these contain more than one family, it is probable that the real needs are about 8,000 houses.

BERMONDSEY

GENERAL POSITION

Area			1,503 acres
Population		1921	119,452
		1931	111,542
Decennial decrease			7,910
1931	Persons per acre		74·2
	Number of private families		28,766
	Population in private families		108,488
	Structurally separate dwellings occupied		18,305
	(vacant		62)
	Rooms occupied		86,654
	Persons per room		1·25
1921-31	Increase in occupied dwellings		39 or 0·21%
	Increase in number of private families		156 or 0·55%
	Families per occupied dwelling	1921	1·57
		1931	1·57
	Average size of private family	1921	4·08 persons
		1931	3·77 persons
	Average number of persons per room	1921	1·34
		1931	1·25
	Persons living more than 2 per room	1921	27,064 or 23·2%
		1931	23,671 or 21·8%
	(Families living more than 2 per room	1931	3,839 or 13·3%)
1931	Persons living over 3 per room		7,082
	3 and over 2		16,589
	Total over 2		23,671
	2 and over 1½		22,341
	Total over 1½		46,012
	1½ and over 1		25,132

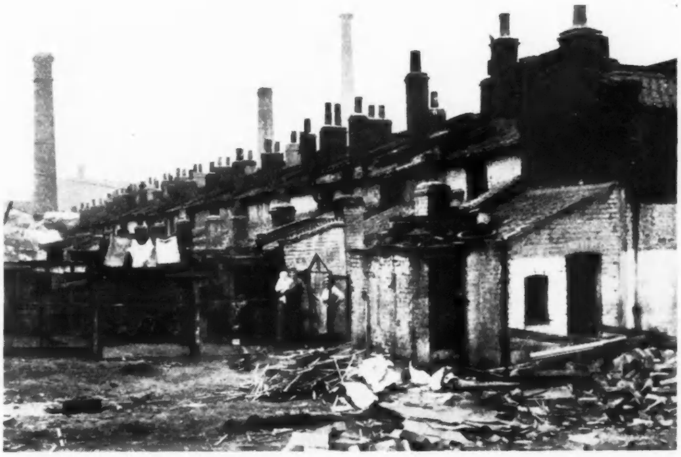
Acute Overcrowding

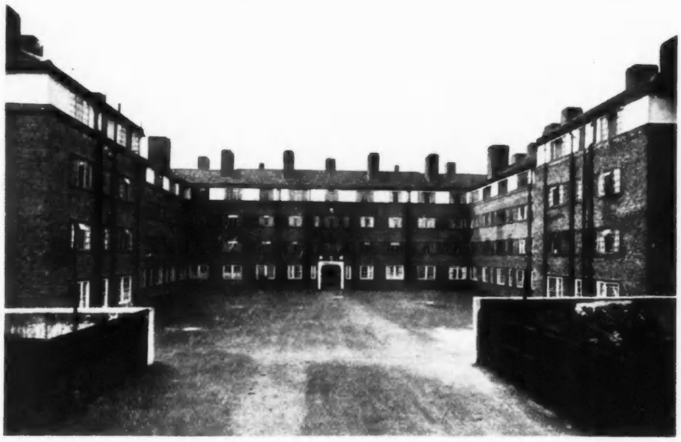
105 families living 6 or more in 1 room.
14 with 8 or more in 1.
None with 10 or more in 1.

226 families living 8 or more in 2 rooms.
40 with 10 or more in 2.
None with 12 or more in 2.

The number and proportion of persons living more than 3 per room increased considerably in the period 1921 to 1931, the number increasing by some 2,200, the proportion from 4·2% to 6·5%.

THE OLD AND THE NEW





An example of what is being done to rehouse slum dwellers in Bermondsey. The Vauban Street area (above), which was declared to be a clearance area under the Housing Act, 1930, and (below) the Harold Estate, a block of 50 flats erected under the 1930 Act for the rehousing of persons to be displaced from the Vauban Street area.

The Wards

Number of wards in the borough	12
Number of wards containing over all average of over 100 persons per acre	4
Number of wards containing over all average of over 80 persons per acre	8
Number of wards containing over all average of over 1 person per room	12
Number of wards containing over all average of over 1½ persons per room	3

Three Worst Wards on Persons Per Room Standard

	No. 1 Bermondsey	No. 6 Bermondsey	St. Olave
Acreage	77	59	34
Population 1921 ..	11,915	9,316	1,973
1931 ..	11,542	8,352	1,908
Persons per acre ..	149·9	141·6	56·1
Private families ..	2,815	1,960	363
Population in private families ..	11,376	8,299	1,503
Structurally separate dwellings occupied ..	1,994	1,302	344
Rooms occupied ..	7,524	5,420	885
Persons per room	1·51	1·53	1·70

Every ward in the borough has an over all average of over 1 person per room, and six show averages over 1·3. Apart from the three given above, these are the figures :—

No. 2 Bermondsey	1·39
St. John	1·34
No. 1 Rotherhithe	1·30
No. 3 Rotherhithe	1·30
St. Thomas	1·26
No. 3 Bermondsey	1·20
No. 5 Bermondsey	1·12
No. 2 Rotherhithe	1·08
No. 4 Bermondsey	1·05

GENERAL VIEW OF THE BOROUGH

Bermondsey is a conglomeration of wharves, docks, factories and working-class houses.

It was built on a swamp and is below high-tide level. Slugs have been observed in inhabited basements.

Much of the cottage property in Bermondsey is old and dilapidated.

Large blocks of tenements in the Tooley Street and Tower Bridge Road areas are insanitary. Large houses, formerly occupied by the middle class, are now occupied by two or three working-class families. So are many of the cottages. Wolseley Buildings is a notorious tenement block.

St. Olave Ward ties with the Old Street Ward of Finsbury as the most overcrowded in London. Only Bermondsey, Finsbury, Shoreditch and Stepney have 3 wards with over all averages of over 1½ per room.

St. Olave is a long, narrow ward stretching along the river bank from London Bridge to Tower Bridge. The whole area is unsuitable for residential dwellings, and all those in it should be demolished, and the area given over to industry.

Speaking of the borough as a whole, the Medical Officer of Health said in 1931 :

> "Most of the property in the borough is between 70 and 150 years old, and a goodly proportion is frankly worn out, irreparable and scarcely habitable. I suppose that the prime defect in most cases is dampness, followed closely by darkness and inadequate flow of air both inside and around the houses. Bad original design and the decrepitude of age, complete the picture. The prevailing overcrowding accelerates the rate of deterioration."

And again :

> " A very large number of houses inhabited by more than one family have the water supply either on the ground floor or in the yard, and there are many houses without a direct supply from the rising main."

WOLSELEY BUILDINGS

Dockhead is being cleared, but Wolseley Buildings has not yet been dealt with. The buildings house over 1,000 persons in less than 200 tenements.

In 1930 the L.C.C. selected this block as one of three areas to be improved. The block is just 50 years old and contains 191 tenements (1 one-room, 163 two-room, 14 three-room and 11 four-room).

Total number of rooms ..	413
Population—at last date known	1,036
Area of the buildings ..	⅝ of an acre
Persons per acre	1,650
Persons per room	2·51

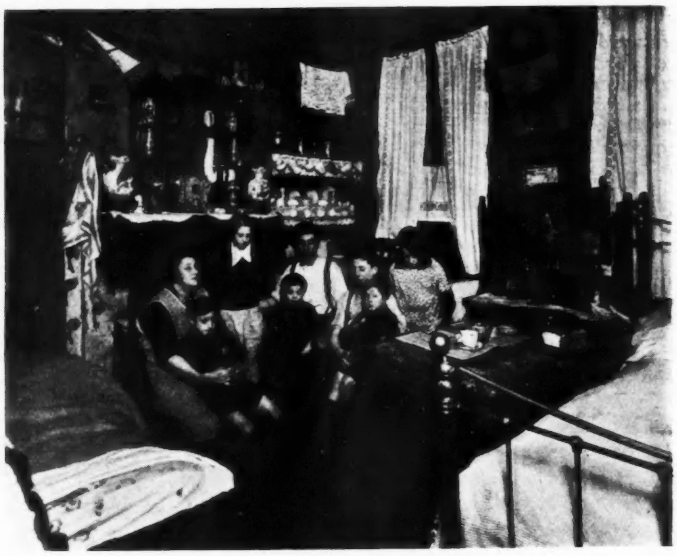
An official description of the buildings (the scheme for improvement of which was in abeyance at the time of writing and has still not been proceeded with) :—

> " One common yard is provided for the whole block. The surface is of tarmac ; the yard is enclosed on every side, and is a dumping ground for all kinds of household refuse. Great difficulty is experienced in keeping it even passably clean, and this in spite of continued effort on the part of both Sanitary Inspector and owner. There are nine common staircases lighted by gas. One w.c. is provided on the landings between two families, and one tap and sink between four families. There are no sculleries and no baths. The dust shoots are inadequate, obsolete and frequently out of order. There is a bi-weekly collection of refuse. Washing accommodation is provided on the roof, and consists of nine washhouses with four coppers in each ; there is no drying room."

The Medical Officer of Health considers that this is a particularly bad block, but others are nearly as bad.

WORK BEING DONE

Some housing is being done. But the flats are far too expensive—16s. 8d. has to be paid for many. In the last nine years the Borough Council have put up 92 flats and 85 cottages. Some 400 flats are now being built, and the Borough Council is



A typical living-bedroom in London. In this single room a man, his wife and six children live and sleep. Most of the floor space is occupied by two beds and a table. The parents and two girls sleep in the bed shown on the right; the boys in the bed on the left.

now dealing with a number of slum areas, including Tanner Street, Neptune Street, Bethel Place and Wright's Buildings. Extensions are to be made to blocks of flats already erected at Harold Estate, Millpond Estate and Amos Estate. The Black Eagle Brewery is to be demolished and a block of flats is to be built on the site. Altogether eight blocks are to be erected.

But the Annual Report of the Medical Officer of Health for 1931 contained the following :—

> "Although 300 families have been moved during the year there are, at present, 1,475 families known to us who are living in overcrowded conditions. It appears from these figures that the position is getting worse rather than better."

And for 1932, after chronicling the clearance work performed in the year, the Medical Officer of Health has to conclude :

> "So far as overcrowding is concerned, I have no fresh facts to report. The position does not seem to me to improve, and the number of overcrowded families known to us in the borough is practically the same as last year."

We know from the Census that there are nearly 4,000 families overcrowded on the Registrar General's Standard.

In the course of the next seven and a half years. Bermondsey hopes to rehouse 10,000 people.

TUBERCULOSIS

The tuberculosis rate for the borough last year was 1·05, compared with 0·82 for London as a whole. *St. Olave Ward*, with a population of 1,908 out of the 111,542 in the borough (1931 Census figures), claimed 11 deaths out of 116. The rate for this ward is thus more than 5½ times that for the borough as a whole.

In view of the fact that the 1,503 persons in St. Olave Ward who live in "private families" inhabit altogether only 344 structurally separate dwellings and 885 rooms, this is scarcely surprising.

The tuberculosis rate for the borough as a whole shows a slight decrease for 1932 as compared with the average for the preceding ten years. In St. Olave the number of deaths in 1932 was the same as the ten-year average for 1922–31, and since the population of the ward has declined, the rate has increased.

RENTS AND ABILITY TO MOVE

Rents average from 5s. for one room to 35s. for six rooms.

The average wage in the borough is at most 45s.

The Medical Officer of Health on the rent question :—

> "Taking into consideration the accommodation provided, the rent is often exorbitant."
>
> "Quite a number of houses are let out by an absent tenant, in single so-called 'furnished rooms,' at rents which are exorbitant and highly profitable to the tenant, although the actual owner may be charging the 'tenant' a reasonable rent."
>
> "In a somewhat similar category is the class of house in which the tenant lets off rooms to two or more families, charging sufficient rent to his sub-tenants to cover the whole, or nearly the whole rent of the house. These premises are practically always overcrowded, and in many cases the sub-letting arrangement is made without the knowledge or concurrence of the owner, and it is very probable that the conditions under which the sub-tenants live are often unsatisfactory, and in the absence of complaint remain unremedied until the Sanitary Inspector pays a 'house to house' visit. It appears to me that these are instances of profiteering which ought not to be allowed, and which at present cannot be prevented."

Taking into account the fact that 17·5% of the inhabitants of the borough live in poverty according to the standard adopted by the "New Survey" it can be seen that for some 5,000 families at least

1 : Present rents are far higher than they can afford, even under overcrowded conditions.
2 : To pay for the necessary number of rooms on present rent basis is impossible.
3 : To pay for the necessary number of rooms in new flats at the rent at present attaching to these is impossible.
4 : To move to estates is impossible.

Of the 1,475 families officially known to be overcrowded in 1931, only 295 were willing to move to estates, and it is probable that in many cases the incomes of those who were willing would not have justified the move.

Cases are known in which overcrowding, abated by a family thus moving to an estate, has recurred, the wage-earner having had to leave the estate owing to unemployment and its inevitable consequences—rent arrears.

In many further instances such families have no doubt returned to other accommodation, insanitary or overcrowded.

CONCLUSION

Bermondsey is working hard at its housing problem, which is one of the biggest in London. It is proposed to rehouse, by 1940, 10,000 people now living in houses which can be demolished under the provisions of the 1930 Act. But there are twice this number living in overcrowded conditions on the Registrar General's Standard. This gives some idea of the problem with which London housing has to deal.

7,082 people living over 3 per room (assume average 4) have 1,770 rooms. They should have 4,720. They therefore require 2,950 more.

16,589 people living 3 and over 2 (assume average 2½) have 6,630 rooms. They should have over 11,000. They therefore require 4,400 more.

22,341 people living 2 and over 1½ (assume average 1¾) have less than 12,770 rooms. They should have 14,900, and therefore require over 2,100 more.

The number of rooms required to abate overcrowding at more than 1½ per room appears, on this analysis, to be 9,500.

If all the overcrowded houses were unfit, 30,600 would be required.

Following the usual rule of the "formula" total requirements appear to be about 20,000 rooms, say 5,000 houses.

But in view of the need to replan the housing arrangements of the borough so that the present mingling of docks, factories and residential dwellings shall be done away with, such a figure will not be adequate.

A proper housing plan for Bermondsey must involve complete clearance of areas adjacent to the river, St. Olave Ward above all. To do this it will be necessary to take down more houses than the number which could be called slums, in order to obtain big rehousing sites.

Keeping this in view it can be stated that Bermondsey requires about 6,000 houses in order to house her whole population at a minimum decent standard in areas suitable for residential sites.

SHOREDITCH

GENERAL POSITION

Area		658 acres
Population	1921	104,248
	1931	97,042
Decennial decrease		7,206

1931	Persons per acre	147·5
	Number of private families	25,084
	Population in private families	94,521
	Structurally separate dwellings occupied	13,678
	(vacant	155)
	Rooms occupied	65,330
	Persons per room	1·45

1921-31	Decrease in occupied dwellings		49 or 0·36%
	Decrease in number of private families		289 or 1·14%
	Families per occupied dwelling	1921	1·85
		1931	1·83
	Average size of private family	1921	4·00 persons
		1931	3·77 persons
	Average number of persons per room	1921	1·54
		1931	1·45
	Persons living more than 2 per room	1921	32,452 or 32·0%
		1931	27,537 or 29·1%
	(Families living more than 2 per room	1931	4,627 or 18·4%)

1931	Persons living over 3 per room	9,621
	3 and over 2	17,916
	Total over 2	27,537
	2 and over 1½	22,491
	Total over 1½	50,028
	1½ and over 1	20,465

Acute Overcrowding

170 families living 6 or more in 1 room.
25 with 8 or more in 1.
2 with 10 or more in 1.
288 families living 8 or more in 2 rooms.
39 with 10 or more in 2.
2 with 12 in 2.

The number and proportion of persons living more than 3 per room increased during the period 1921 to 1931, the number by about 750, the proportion from 8·7% to 10·2%.

The Wards

Number of wards in the borough	8
Number of wards containing over all average of 100 persons per acre	7
Number of wards containing over all average of over 80 persons per acre	7
Number of wards containing over all average of over 1 person per room	8
Number of wards containing over all average of over 1½ persons per room	3

Three Worst Wards on Persons Per Room Standard

	Church	Hoxton	Whitmore
Acreage	105	79	81
Population 1921 ..	17,153	16,686	16,761
1931 ..	16,404	15,898	14,968
Persons per acre ..	156·2	201·2	184·8
Private families ..	4,301	4,292	3,603
Population in private families	16,176	15,751	14,140
Structurally separate dwellings occupied	2,491	2,313	1,940
Rooms occupied ..	10,229	10,350	9,232
Persons per room ..	1·58	1·52	1·53

In every Ward the average is 1·20 Persons Per Room or over.

Figures for the five wards not shown above are :—

Wenlock	1·48
Haggerston	1·45
Kingsland	1·38
Moorfields	1·26
Acton	1·20

GENERAL DESCRIPTION OF THE BOROUGH

Shoreditch is the most "Cockney" area in London. A large proportion of the houses date from the early part of the Industrial Revolution. Tenements and small cottages, badly overcrowded, damp, in narrow alleys, without proper light or air, occupy large parts of the borough.

The area generally known as Hoxton, which is, of course, much more extensive than the Hoxton Ward, is the worst part. Poverty and overcrowding almost universal.

The London Survey cannot find a single residential middle class street in the borough.

Worst parts are round Nile Street, round Essex Street, Kingsland Road, and round Wilmer Gardens. The Wilmer Gardens area is being rebuilt. Essex Street, one of the worst in London, is in comparatively good external repair.

The northern part of the borough is not so bad, but except for the Acton Ward, it is almost as overcrowded as Hoxton and Church Wards, and, as shown, every ward shows an over all average of 1·2 per room or more.

Almost 10% of the whole population is living at more than 3 per room, and over 50% at more than 1½ per room. The area of the borough is a little over one square mile, the population is nearly 100,000. Half the houses are occupied by two or more families.

Underneath the houses is a five-foot layer of refuse.

Overcrowding

Besides the insanitary character of the houses, and their decay, Shoreditch has

SAFETY FIRST

The problem of playing space for children is another of the many problems that cannot be solved while our working-class areas remain as congested as they are. The upper photograph shows a block of flats in Vienna with ample playing space provided, both safe and secluded; the lower one shows a common scene in a London street, with children playing in the only place available—exposed to the dangers of traffic, dirt and lack of open air.

to contend with the steadily increasing expansion of the City. There are now some 3,000 business premises and 14,000 structurally separate dwellings. Land values in the southern parts of the borough are ever soaring higher—far beyond the point possible for housing work. The inhabitants are forced to crowd into other houses. Few can afford to move to new estates.

Open Spaces

There is no playing field, park, or large open space.

Poverty

There are about 5,000 persons recorded as unemployed, about 3,000 receiving domiciliary relief.

In 1932 there were 1,180 deaths belonging to the borough.* 818 of these, 69·3%, died in public institutions.

Disease

Cancer accounted for 148 (12·5%) of the 1,180 deaths. Tuberculosis, in all forms, for 101 (8·6%). Pneumonia, in all forms, for 96 (8·1%).

27 of the deaths from cancer belonged to the Church Ward, 29 to the Hoxton Ward.

Infantile Mortality

The Borough rate for 1932 was 80 (Hoxton Ward 116,
1931 75 Church Ward 110)
1930 65

UNHEALTHY AREAS

In 1919 *six* unhealthy areas were represented—by 1930 a housing scheme had been approved for part of *one.*

In 1931 the areas were all re-represented, and the following notes were made in respect of the areas :—

Ware Street Area

Work was begun upon this by the L.C.C. in the summer of 1924. At the present time the number of blocks of dwellings that have been completed is 12, comprising 361 tenements and 1,011 rooms. The number of blocks of dwellings remaining to be built is 6. This area is considerably larger than the others, the average estimated population for the five years ending 1918 having been 5,000. The area is 14·2 acres.

Britannia Gardens Area

Britannia Gardens : Badly dilapidated—depth of front gardens 36 ft. ; allow room for building.
Canton Terrace : Hardly in condition to warrant condemnation.
Pimlico Walk : Some rebuilding since representation.
Kingsnorth Place : Have been improved.
Pounds Buildings : Have been improved.

Drysdale Place Area

With slight modifications this area was again represented in 1929. The houses are old and dilapidated and the streets narrow. The area should be dealt with as soon as possible.

Lynedoch Street Area

Lynedoch Street : These houses have improved during the last ten years.
Ely Place—North side : Two rooms—no back entrance—one small back window upstairs. One water hydrant to every six houses, w.c. in front garden. Should be pulled down. South side : Two rooms—very small yard containing w.c. Separate water supply. Should be pulled down.

Wilks Place Area

Barton Court : Should come down.
Wilks Place : Four small rooms. Fronts in good condition, backs old and worn. Should come down.

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* This is the "corrected" figure—deaths registered *minus* deaths of non-residents registered in Shoreditch *plus* deaths of Shoreditch residents registered elsewhere.

Wilks Court: Nine tworoom houses. Back to back with hostel in Hoxton Street. Should come down.

Foundry Place Area

This area has been improved. Brickwork in good condition—little or no dampness. This area would not be represented at present time.

Foundry Row: On east side back extensions are back to back.

The Housing Committee asked the L.C.C. their intentions regarding the Britannia Gardens, Drysdale Place, Lynedoch Street, and Wilks Place areas.

The L.C.C. replied that in view of the financial situation, they were not prepared to consider any of those areas for clearance.

Typical Descriptions of Houses

(From a recent investigation).

"Man, wife and five children between 15 and 2 are living in one room; all the children are delicate."

"Man, wife and seven children between 12 and 1 are living in two rooms; three of the children are anæmic and cannot get enough sleep (doctor's report)."

RECENT ACTION IN RESPECT OF OVERCROWDING

Over the last intercensal period a slight improvement in the number of persons per room is to be noted. But the number of families has decreased very slightly, so that the number of separate lettings has not fallen proportionately with the fall in population, and the number of families per house is practically static.

It is quite impossible for the Borough Council to take much action in regard to overcrowding.

	Cases coming to notice of Department	Number Remedied	
1930	136	92	
1931	168	192	(47 to L.C.C. estates outside borough, 145 "elsewhere")
1932	226	226	(64 accommodated outside by L.C.C. 16 in Borough by L.C.C., the rest elsewhere—mostly in the Borough.)

(163 applications were dealt with by the L.C.C. apart from the above.)

A very slight easing of the situation was noted by the Medical Officer in 1931, and this seems to have continued. But the following facts show how slight the easing is.

UNDERGROUND ROOMS AND UNFIT HOUSES

The Medical Officer of Health estimates that there are some 2,000 underground rooms which do not comply with the requirements of the 1925 Act, and remarks that:

"The great difficulty experienced by poor people in finding reasonable accommodation within their means is well illustrated by the fact that it has proved necessary to allow these rooms to continue in occupation."

Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation:

1931, 2.
1932, nil.

Family of six adults and four children are living in two rooms of a very damp old cottage in Shoreditch, with part share of an outside water supply; seven sleep in the bedroom and three in the sitting room; the father is rheumatic, and one child has fainting attacks due to "undernourishment and overcrowding."—Doctor's report.

Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation:

1931, 19.
1932, nil.

Proceedings under sections 19 and 21 of the Housing Act, 1930. Number of dwelling-houses in respect of which demolition orders were made:

1931, nil.
1932, nil.

DIFFICULTIES OF TAKING EFFECTIVE ACTION

After commenting on the necessity, under the present circumstances, for the Council to use the Public Health Acts and the Public Health (London) Act, the Medical Officer makes the following comments on the long-term situation:

"*The houses in Shoreditch, however, are old, and no matter how many notices, formal and informal, are complied with, their age sooner or later renders them derelict and unfit for human habitation and ultimately reduces them to a condition in which the District Surveyor must order their partial or complete demolition. . . .*"

"*Whatever may be done by way of slum clearance, it is essential if the remaining houses are not to be allowed slowly to degenerate into slums in their turn, that some workable scheme should be evolved whereby extensive reconditioning of ageing house property may be effected.*"

A year ago he said:

"*Difficulty has been experienced in making use of Section 17 of the Housing Act, 1930, for the reason that in many cases considered, it has been decided that it was not likely to be held that the work required to make the house fit for habitation could be carried out at reasonable cost. In other words, very many houses in the Borough have been kept in habitable repair for many years by action taken under the Public Health Act, and have now reached a stage of decrepitude in which action on a large scale under the Housing Act is impracticable. There is, further, the difficulty of obtaining temporary accommodation for occupiers while the necessary work is done.*"

POSSIBILITIES OF IMMEDIATE ACTION

It is now possible to use the Provost Street site as a decant. This site consists of 53 houses, containing some 270 rooms, bought 10 years ago by the L.C.C. Only 6 or 7 of these houses are occupied. No repairs are undertaken now. The site was purchased in order to build a school and this idea has now been given up.

RENTS

A very large proportion of the dwellings in Shoreditch, nearly 90%, are controlled. Decontrol has been known to involve a 100% increase in rent. The usual evils of sub-letting of controlled tenancies are to be found, as in all crowded areas in London.

In the face of this it is not likely that much filtering up will take place. Poverty is widespread, and even the fairly well paid workers are not enthusiastic at the idea of paying more than their present rent for a better house at some distance from work, with the cost of fares as a further factor.

CONCLUSION

The conditions existing in this borough have been described. The difficulties of taking any useful action, except by a large-scale plan, are only too obvious.

It only remains to attempt an estimate of total housing needs.

9,621 people living over 3 per room (assume average 4) have 2,400 rooms. They should have 6,400, and therefore require 4,000 more.

17,916 people living 3 and over 2 (assume average $2\frac{1}{2}$) have rather over 7,150 rooms. They should have 11,950 and therefore require nearly 4,800 more.

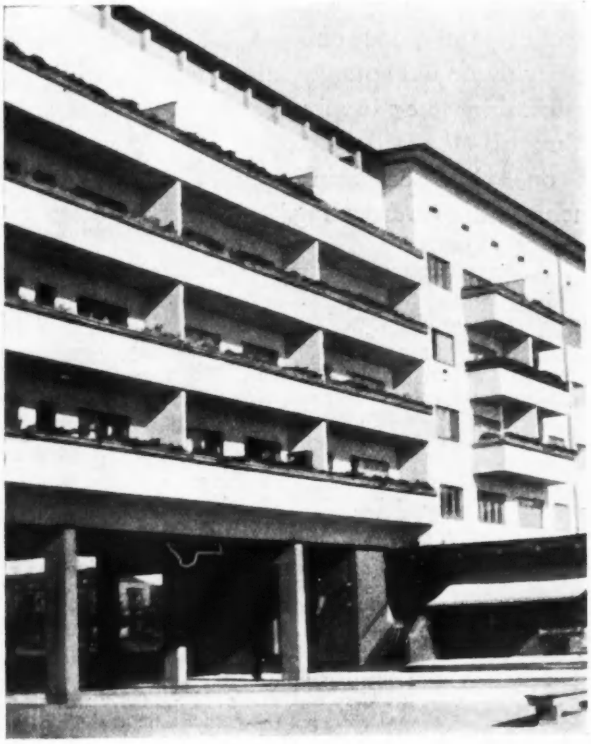
22,491 people living 2 and over $1\frac{1}{2}$ (assume average $1\frac{3}{4}$) have 12,850 rooms. They should have 15,000 and therefore require 2,150 more.

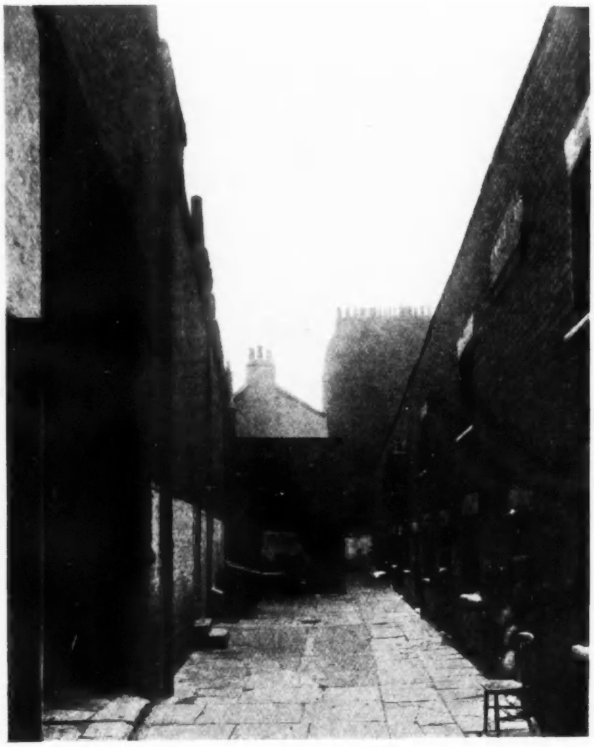
Merely to abate overcrowding at more than $1\frac{1}{2}$ per room therefore requires 10,950 rooms. If all the overcrowded houses were unfit, requirements would be 33,350 rooms.

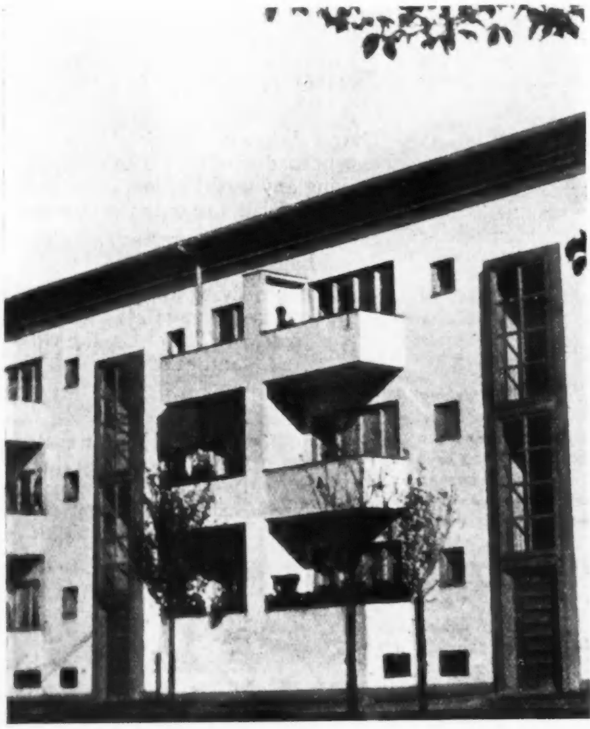
Raising these figures by 25% gives 13,700 and 41,700.

The geometric mean is about 24,000 rooms, or say 6,500 houses.

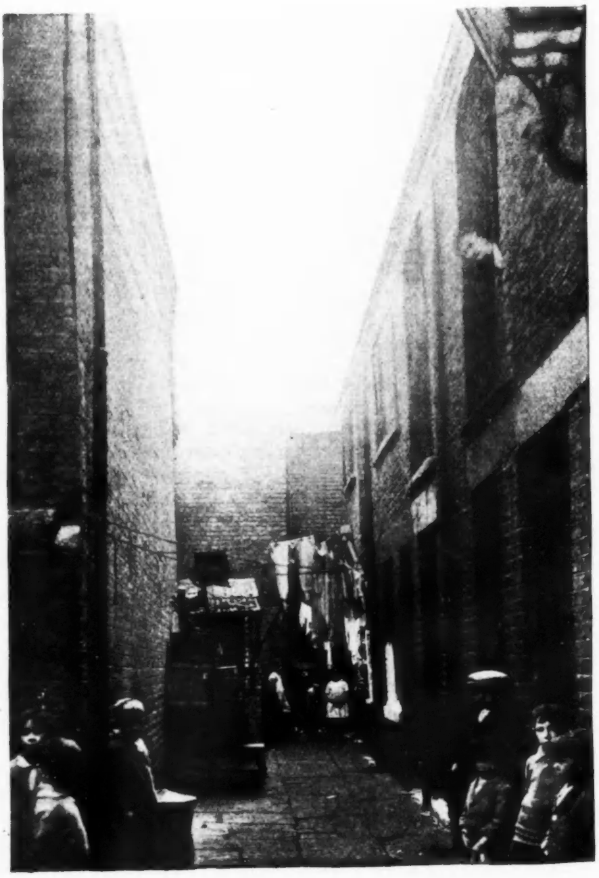
OPEN AND ENCLOSED SPACE







A comparison of the sensible Continental and the English traditional way of housing the working classes. Above: two photographs of the Reineckendorf Siedlung in Berlin, open to the sunshine with plenty of space and air. Right: two typical photographs taken in Southwark (top) and Hackney.



PADDINGTON

GENERAL POSITION

Area			1,357 acres
Population 1921			144,261
1931			144,923
Decennial increase			662

1931	Persons per acre		106·8
	Number of private families		40,714
	Population in private families		125,430
	Structurally separate dwellings occupied		19,281
	(vacant		592)
	Rooms occupied		139,600
	Persons per room		0·90
1921-31	Decrease in occupied dwellings		152 or 0·78%
	Increase in number of private families		2,394 or 6·25%
	Families per occupied dwelling	1921	1·97
		1931	2·11
	Average size of private family	1921	3·43 persons
		1931	3·08 persons
	Average number of persons per room	1921	0·93
		1931	0·90
	Persons living more than 2 per room	1921	20,236 or 15·4%
		1931	15,427 or 12·3%
	(Families living more than 2 per room	1931	2,743 or 6·7%)

1931	Persons living over 3 per room	5,185
	3 and over 2	10,242
	Total over 2	15,427
	2 and over 1½	18,762
	Total over 1½	34,189
	1½ and over 1	22,281

Acute Overcrowding

70 families living 6 or more in 1 room.
12 with 8 or more in 1.
1 with 10 in 1.

160 families living 8 or more in 2 rooms.
31 with 10 or more in 2.
3 with 12 or more in 2.

The number and proportion of persons living more than 3 per room increased during the period 1921 to 1931, the number by about 250, the proportion from 3·8% to 4·1%.

The Wards

Number of wards in the borough	9
Number of wards containing over all average of over 100 persons per acre	5
Number of wards containing over all average of over 80 persons per acre	8
Number of wards containing over all average of over 1 person per room	3
Number of wards containing over all average of over 1½ persons per room	nil

Three Worst Wards on Persons Per Room Standard

	Church	Harrow Road	Town
Acreage	140	153	62
Population 1921 ..	17,492	27,512	7,460
,, 1931 ..	17,328	25,473	7,207
Persons per acre ..	123·8	166·5	116·2
Private families ..	4,701	8,426	2,246
Population in private families ..	15,737	25,393	6,785
Structurally separate dwellings occupied ..	1,514	2,797	941
Rooms occupied ..	11,606	24,220	6,321
Persons per room..	1·36	1·05	1·07

GENERAL NOTES

The central parts of Paddington show conditions of terrible overcrowding. This area is really one with the north-east part of Kensington. The Church and Harrow Road Wards are the worst.

The notorious Clarendon Street is in the Church Ward, off the Harrow Road. The houses are structurally sound but dreadfully overcrowded. Many houses are let off in single rooms.

Brindley Street, Hampden Street and Alfred Street are situated just across the Harrow Road from Clarendon Street and Amberley Road, and have been bad for many years.

Large parts of Westbourne Ward are showing signs of following the central part of the Borough into slumdom.

Immigration of Irish and of people coming to London from industrial towns on the Great Western Railway probably account for some of the increase in infantile mortality figures during the last three years. These factors cannot, however, have caused all the difference which is to be noted.

Infantile Mortality

Infantile mortality shows an alarming increase over the last three years.

Borough figures :—

1930 ..	78	(London average 59)
1931 ..	87	(London average 65)
1932 ..	107	(London average 66)

Ward figures :—

	1930	1931	1932
Queen's Park ..	43	55	125
Harrow Road ..	39	78	80
Maida Vale	97	81	84
Town	50	106	161
Westbourne	86	80	107
Church	122	116	138
Lancaster Gate, West	98	109	113
Lancaster Gate, East	103	60	97
Hyde Park	62	90	79

Figures for special localities :—

	1930	1931	1932
North Wharf, Church Ward	77	53	105
Clarendon Street, Church Ward	153	116	142
Alfred Road, Westbourne Ward ..	84	116	123
Amberley Road, Maida Vale Ward ..	206	48	190

In view of the smallness of these special localities, it is natural that the percentages should vary greatly from year to year. The total number of deaths occurring, and the rates, as shown, are however, large enough to give a good picture of these "black spots."

Disease Figures for 1932, by Wards

Notifications

	Diphtheria and Membraneous Croup	Erysipelas	Pneumonia (Influenzal and Primary)	Scarlet Fever	Totals
Queen's Park ..	21	4	20	23	68
Harrow Road ..	29	13	41	72	155
Maida Vale ..	13	4	37	39	93
Town	14	3	20	10	47
Church	47	12	53	26	138
Westbourne ..	59	13	59	60	191
Lancaster Gate, West	6	2	7	20	35
Lancaster Gate, East	3	2	2	17	24
Hyde Park ..	8	7	11	19	45

Total of these particular notifiable diseases in

Harrow Road, Town, Church and Westbourne	531
Queen's Park, Maida Vale, Lancaster Gate (East and West) and Hyde Park ..	265
Population at 1931 Census respectively	75,259 and 69,664

showing a disease ratio in the first four nearly twice as high as that in the remainder.

THE CLARENDON STREET DISTRICT

A careful survey of the worst parts of the borough was made in 1930, since which date matters may have changed in respect of individual instances recorded. The conditions as a whole are still just as bad.

Clarendon Street and Amberley Road are built immediately along opposite sides of the Canal. Barge-loads of refuse taken along cause bad smells in summer.

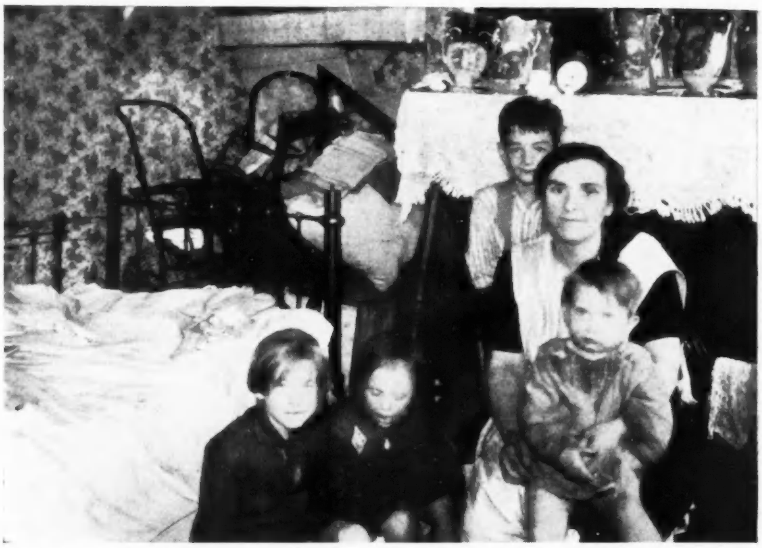
The houses were, of course, intended for single family occupation and are now let off in floors or single rooms.

From the survey report :—

> "Stucco is crumbling ; doors and window sashes, and area and balcony railings are deteriorating for want of paint ; area walls need lime-whiting ; fanlights and innumerable window panes need re-glazing. Steps leading to front doors and areas are frequently chipped and broken ; many area railings are loose, and some are broken or missing—this is dangerous for children . . .
>
> "Inside repairs are as neglected as outside work. Plaster and woodwork are dilapidated, rooms dirty and verminous, stoves, coppers, locks, and sash-cords broken. Tenants complain that repairs are done reluctantly, and generally as the result of a Sanitary Order."

1,565 persons, of whom 473 were children of under ten, were found living in the 109 houses for which particulars of occupancy were obtained. The houses were not specially selected.

SIX IN A ROOM



This one-roomed home in East London is occupied by six people—father, mother and four children. The family live, eat and sleep in this room ; the perambulator, chairs, washing, etc., is stored in one corner, as can be seen from the above photograph. Cooking is done on a gas-ring.

Counting children under 10 as halves and counting all rooms except wash-houses, 41·8 per cent. of the people were living over 2 to the room.

This figure would appear typical for the worst parts of the Church and Harrow Road Wards, and the investigators stated that there was ground for supposing that worse conditions prevailed in parts of the Harrow Road Ward which were not visited.

In Clarendon Street the density found was 1·9 persons per room.

In Darlington Terrace the density was 2·5 persons per room.

And it should be emphasized that there are many cases of one person—one room in these streets, bringing the overcrowding figure for family occupations much higher than these street averages.

This appears to be the worst case found :

> "In one front basement live a man and wife, a boy of 7, and girls of 11, 10, 9, 6, 4 and 3. This basement room is one of the worst in the street. The front room on the ground floor was at one time a shop, and the area has been partially covered in, so that light only reaches the room below through the bars of an iron grating. The room is consequently very dark. The walls are distempered in a dingy blue colour, and need repair. Plaster is falling in places. There are no cupboard doors (the tenant states there were none when she came) and coals are heaped in a corner with an old curtain across them. The tenant states she is *obliged to use an oil lamp* for lighting, as the gas company will only let her have the use of gas on a quarterly meter which she cannot afford. Most of the room is taken up by two large beds, on one of which is the rolled-up bedding put down on the floor at night for some of the children.
>
> "The man is at present out of work.
>
> "This family at one time rented the back addition room, measuring about seven feet square, for 2s. 6d. weekly, but gave it up as it was too damp and dilapidated to use. Repeated requests and sanitary orders resulted in rough patching of the roof, which was worse than useless."

Two Cases in Brindley Street, recently reported in the Press by an Inhabitant

> "A worker, his wife and three children, living, eating and sleeping in one small room, ten feet by nine . . . pays 5s. 6d. rent."
>
> "In one house of six rooms there are 28 persons living."

Rents

Common rents in the Clarendon Street district and in similar parts of the Borough are 8s. for 2 rooms for controlled tenements, 13s. for decontrolled.

Extortionate charges for "furnished" lettings are common : 12s. 6d. or 15s. for single rooms being quite usual for rooms supplied with the meanest furniture, viz. :

chest and table in one room.
two chairs, chest, bed and table in the other.

Ability to Pay Higher Rent, or Present Rent

At the time of the survey it was found that out of 50 families for which detailed information as to income was made available—

2 families could afford an L.C.C. flat of the necessary size.
24 families could afford the necessary minimum of rooms on the lowest current rent basis in the area—about 7s. 6d. for two rooms.
24 families were unable to afford minimum decent accommodation.

The minimum decent accommodation was taken to be that number of rooms which would allow not more than 2 per room (children under 10 counted as halves), and provide for sex separation over 10 years of age. Kitchens and bathrooms were excluded from the computation of rooms, but living rooms would still have to be sleeping rooms in some instances.

The maximum rent that the people could afford was taken as 20 per cent. of maximum regular income.

CONVERSION OF HOUSES INTO TENEMENTS

> "Plans continue to be submitted to the Council under the drainage bye-laws, relative to the conversion of premises into tenements. It is probable that a number of other conversions were carried out in which no interference with existing drainage was involved."
> (Annual Report of Medical Officer of Health, 1932.)

UNHEALTHY AREAS, HOUSES UNFIT FOR HABITATION, OVERCROWDING

No representations as to unhealthy areas made in 1932.

Two Closing Orders made in respect of unfit basements.

Action taken with respect to illegal occupation of underground rooms at *three* premises.

Six tenements in registered houses were reported overcrowded.

"Owing to existing social conditions only extreme cases of overcrowding are dealt with by official action."

Housing Work in the Borough—the Paddington Houses Association

This Association now owns 85 houses in Paddington containing nearly 1,400 people. This is, of course, a drop in the ocean. Experience shows that amenities such as those provided by the Association and by other good landlords are appreciated by the tenants.

Housing provided by the Borough Council

The Borough Council has supplied 8 flats—since the war. An order was made in 1930 for compulsory purchase of a site in Brindley Street comprising three houses.

On this site the 8 flats have been erected.

This is a smaller drop in the ocean.

Housing provided by the L.C.C.

452 Paddington residents have obtained accommodation on L.C.C. estates.

The estates at St. Helier and Becontree will be useless for Paddington workers.

150 houses on the Hammersmith Estate have been set aside for Paddington, by agreement, and these houses are now occupied.

CONCLUSION

Paddington has hardly a vacant site. And the number of London County Council houses available for the inhabitants of the Borough would be inadequate even if those who most needed them could afford to move to them, which they cannot.

The general shortage of houses has resulted in continually increasing sub-letting, unaccompanied by structural alterations (see Medical Officer's remark above).

Accommodation close to the place of work is essential for a large number of canal and railway workers and labourers.

Many of the small landlords in the area cannot afford to do necessary repairs. Many who can refuse to. The provisions of the Rent Restriction Acts have led to the device of the "furnished" letting as a method of obtaining a good return, while advantage is taken to the full when houses become decontrolled.

Low and uncertain incomes result in acute overcrowding, particularly the crowding of large families into insanitary basements.

In Paddington there are

5,185 people living over 3 per room (assume average 4). They have 1,300 rooms and should have 3,450. They therefore need 2,150 more.

10,242 people living 3 and over 2 (assume average 2½). They have 4,100 rooms. They should have over 6,800 and therefore need over 2,700 more.

18,762 people living 2 and over 1½ (assume average 1¾). They have 10,720 rooms. They should have over 12,500 and therefore need nearly 1,800 more.

Merely to abate overcrowding at more than 1½ per room requires, on this analysis, the provision of 6,650 rooms. This must be increased by 25 per cent. to allow for the impossibility of housing everyone at precisely 1½ per room—to over 8,300.

If all the overcrowded houses were unfit the need would be for 28,500 rooms.

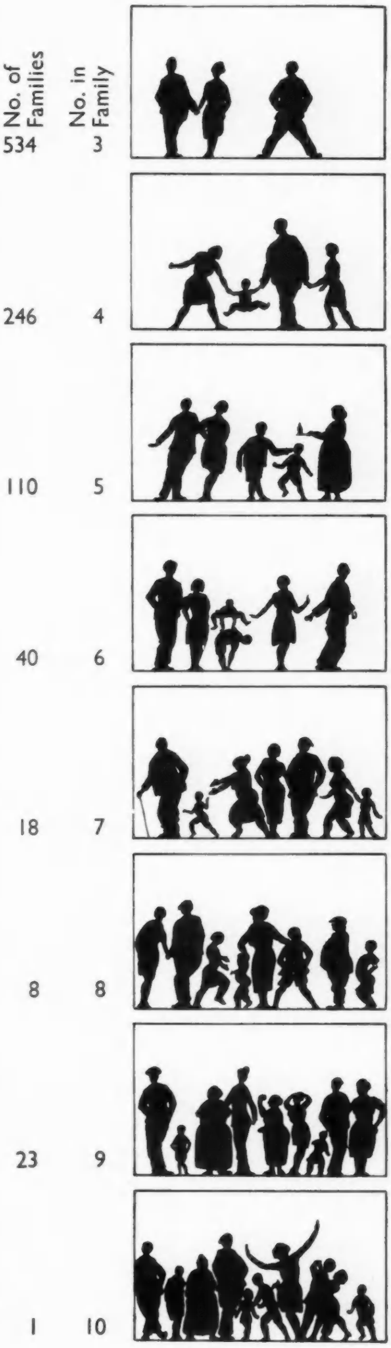
The geometric mean of these gives about 15,000 rooms, say 5,000 houses, as the true needs.

It may be said that the number of houses in the borough which are unfit for habitation, and cannot reasonably be made fit cannot be as high as is indicated by the extra 6,700 rooms. But :—

1. Large numbers of unhealthy basements in otherwise sound houses need closing.
2. In order to recondition parts of the borough which are not bad enough for clearance, but need proper reconditioning (coupled with the provision of new accommodation for families which such reconditioning will cause to be superfluous in their present houses)

The provision of some large blocks of flats in the worst parts of the borough, coupled with houses outside the boundaries for those who can afford them, is the only practicable solution of the housing problems of Paddington.

THE BED-LIVING ROOM IN PADDINGTON



The above table shows, in pictorial form, the degree of overcrowding existing in the Borough of Paddington. The number of families of more than two persons living in a single room is given for each size of family.

There are, out of a population of 144,923 (1931 census), according to Mr. Massey's present investigations, 15,427 people in the borough living more than two to a room.

AT A GLANCE

SOUTHWARK

HOLBORN

HOLBORN

ST. PANCRAS

POPLAR

UNITED TO SERVE

GENERAL POSITION

Area	1,132 acres
Population 1921	184,404
1931	171,695
Decennial decrease	12,709

1931	Persons per acre	151·7
	Number of private families	46,372
	Population in private families	164,274
	Structurally separate dwellings occupied	27,168
	(vacant	167)
	Rooms occupied	128,558
	Persons per room	1·28

1921-31	Decrease in occupied dwellings		1,657 or 5·75%
	Decrease in number of private families		355 or 0·76%
	Families per occupied dwelling	1921	1·62
		1931	1·71
	Average size of private family	1921	3·79 persons
		1931	3·54 persons
	Average number of persons per room	1921	1·36
		1931	1·28
	Persons living more than 2 per room	1921	41,574 or 23·5%
		1931	35,517 or 21·6%
	(Families living more than 2 per room	1931	5,903 or 12·7%)

1931	Persons living over 3 per room	10,230
	3 and over 2	25,287
	Total over 2	35,517
	2 and over 1½	36,042
	Total over 1½	71,559
	1½ and over 1	37,605

Acute Overcrowding

120 families living 6 or more in 1 room.
17 with 8 or more in 1.
None with 10 or more in 1.

315 families living 8 or more in 2 rooms.
51 with 10 or more in 2.
6 with 12 or more in 2.

The number and proportion of persons living more than 3 per room increased during the period 1921 to 1931, the number by nearly 1,000, the proportion from 5·3% to 6·2%.

The Wards

Number of wards in the borough	10
Number of wards containing over all average of over 100 persons per acre	8
Number of wards containing over all average of over 80 persons per acre	9
Number of wards containing over all average of 1 person per room	10
Number of wards containing over all average of over 1½ persons per room	1

Three Worst Wards on Persons Per Room Standard

	St. George's	St. John's	St. Michael's
Acreage	99	118	93
Population 1921 ..	17,814	29,367	20,541
1931 ..	16,619	27,252	19,232
Persons per acre ..	167·9	230·9	206·8
Private families ..	4,166	7,467	4,654
Population in private families ..	16,504	26,905	17.862
Structurally separate dwellings occupied ..	2,715	4,598	3,578
Rooms occupied ..	11,681	19,761	11,867
Persons per room..	1·41	1·36	1·51

Every ward in Southwark has an over all average of over 1 person per room, and six show averages over 1·3.

Apart from the three given above, these are the figures :

Christchurch	1·35
St. Saviour	1·35
St. Jude's	1·33
Trinity	1·24
St. Mary's	1·20
St. Peter's	1·20
St. Paul's	1·05

GENERAL NOTES

St. John's Ward covers Walworth—the exact centre of London. The Hard Street area shows terrible over-crowding and unfit housing.

The borough as a whole is very mixed.

Industrial expansion, southwards from the river, is causing a decrease of population—but not of the poorer class.

The mid-1932 population estimate of the Registrar General is 168,900—2,800 less than the 1931 Census figure.

But, as shown above, *the number living over 3 per room increased by nearly 1,000 between 1921 and 1931, despite a total population fall of over 12,700.*

The most unsatisfactory area is St. Saviour Ward, which lies along the river between London and Blackfriars Bridges.

Trinity Ward, between Newington Causeway and Borough High Street and the New Kent Road, and St. John's, south of the New Kent Road, contain narrow alleys crammed with ancient and utterly unsatisfactory property, some of the houses are back-to-back.

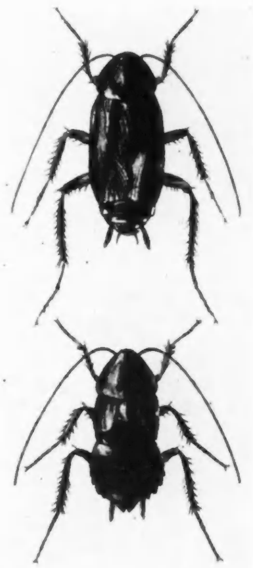
St. Jude's and St. Michael's, which lie between these areas, show worse figures for infantile mortality—there is really little to choose between all of these.

Overcrowding, Infantile Mortality Birth and Death Rates, by Wards

Infantile Mortality rate for borough as a whole :

1931	61
1932	72

THE BLACK-BEETLE



The male (top) and female black-beetle.

THE cockroach — one of the horrors of slum life — is popularly known as the black-beetle. It is not, however, a beetle in the scientific sense of the term, but belongs to a more primitive order of insects, called the *Orthroptera.* In this country two species of cockroaches are found commonly in houses, the Common or Oriental Cockroach and the German Cockroach. The habits of the two species are very similar. The flattened body enables the cockroach to gain entrance through very small cracks and crevices, and to shelter almost anywhere. Dwelling-houses, on account of the equable temperature and the regular food supply, are generally preferred by this pest and it is safe to state that the majority of slum dwellings, particularly basements, are infested with black beetles.

The general colour of the Common Cockroach is not black, as the popular name of " black-beetle " would lead us to believe, but very dark brown. The antennæ are nearly as long as the body, and composed of many segments. The abdomen of the female is broader than that of the male, and appears to be dragged along the floor when the insect is in motion, while the male, on the other hand, when running keeps its body clear of the ground. The length of both male and female adults is just under an inch.

In this species the females are about three times as numerous as the males. Pairing in the Common Cockroach is not confined to certain months, but is independent of the season, and takes place as soon as sexual maturity is reached. Ten days or a fortnight after pairing, oviposition begins. The capsule which is formed is fairly large, being about half an inch in length by a quarter of an inch in breadth, but the dimensions vary a little. It contains two rows of eight eggs each, but here again there may be a slight variation. The female may carry the capsule protruding from the extremity of the abdomen for some twelve hours or even as long as five days, but ultimately she deposits it in a warm, sheltered spot, preferably near a food supply.

Mother-love appears to be non-existent in this species, for the mother takes no interest in, and gives no assistance to, her progeny; the young struggle and shake themselves free from the impending cases, and almost immediately are able to walk about. Though there are on the average about sixteen eggs in each capsule, it is but rarely that they all mature, and the normal number of young to hatch would seem to be about ten or eleven.

Cockroaches love the dark. During the day or when a room is lighted they keep to their hiding places, but as soon as it is dark they come out. They do not walk, they *run,* and owing to their speed and flattened bodies are difficult to catch or kill.

The harm done by cockroaches is due not so much to the quantity of food these pests consume, as the amount they taint and spoil ; they leave their excreta over everything, and food tainted by them, even when cooked, has a distinctly "roachy" flavour. This "roachy" taste and smell is communicated partly by the wax which is secreted by certain glands on the body, and partly also by a fluid ejected through the mouth.

The cockroach is normally a scavenger, and may, at times, be useful in consuming dead animal matter, while it has one other redeeming trait—it will prey upon, and ultimately eradicate, the bed-bug.

Ward figures for 1932 shown side by side with over all overcrowding figures :

	Persons per room	Infantile mortality	Birth-rate	Death-rate
St. Michael's	1·51	93	16·5	15·0
St. George's	1·41	64	20·0	10·7
St. John's	1·36	54	16·0	13·4
Christchurch ..	1·35	79	18·7	17·7
St. Saviour ..	1·35	62	15·4	10·2
St. Jude's	1·33	116	16·6	12·7
Trinity	1·24	71	17·3	13·3
St. Mary's ..	1·20	63	16·0	14·0
St. Peter's ..	1·20	72	14·4	12·6
St. Paul's	1·05	68	13·3	12·5

Description of Worst Areas and the Need for Proper Planning

Several of the worst patches in the northern part have been cleared during the past three years and the present Medical Officer of Health has many schemes in view.

Hard Street, the worst part of all, is being dealt with by the L.C.C. The courts in this area are narrow and dark, most of the cottages being infested with rats, and very overcrowded. 165 houses with a population of 785 are contained in the area, which was first " represented " in 1919.

In the 10 years following the war hardly any housing work was done. Southwark is one of the most overcrowded large areas in London. Such overcrowding makes what are virtually slum houses.

The amount of actually unfit property is very large indeed. " Damp, dilapidation of every kind, obsolete design and construction, vermin, and every other evil feature that can be encountered abound throughout the whole Borough "—that is a just description of Southwark.

Large parts of the borough belong to the Ecclesiastical Commissioners and to the Corporation of the City of London. The former manage their property very well indeed, but much of the property belonging to the City Corporation is in a deplorable state and has been so for many years. It has recently been announced that action is to be taken by the Corporation. 500 people are to be rehoused, mainly from Tupman Place, Friar Street, near Blackfriars Road.

10,000 houses suffer from serious sanitary defects, and about half of these are not really worth repairing owing to their being situated in areas unsuitable for residential dwellings, or because they are past patching.

Throughout large parts of the borough the Housing Acts are virtually not operative. Poverty and unemployment are rife and the decrease in the number of dwellings available for residential purposes is causing the number of persons living in conditions of acute overcrowding to increase. The indiscriminate invasion of factories and workshops must give place to a zoning scheme. These industrial properties until quite recent years were confined to the neighbourhood close to the river. Now, however, the wharfs are only the fringe of the industrial area, which is spreading southwards, and is quite apparent now as far south as Borough Road, or even the Elephant and Castle.

BLOCK BUILDINGS

Block buildings contain a large proportion of the inhabitants of the borough. These range from modern self-contained flats to obsolete barrack-like tenements. The best are the Tabard Garden Estate, but the rents there are prohibitive—over £1 per week for four rooms, kitchen and bathroom, 14s. for two rooms, kitchenette and bathroom being the average.

A corner of a court off Milcote Street, Blackfriars Road, Southwark.

The new Peabody Blocks, Douglas Buildings (owned by the Improved Industrial Dwellings Company) and Pullen's Buildings are not quite up to the Tabard Garden Estate standard. Pullen's Buildings have no bathrooms. But the rents are within possible reach of the average wage-earner, about 12s. for four rooms.

From these good new blocks a gradual descent may be traced to blocks such as those in Lion Street where the front rooms on upper storeys are satisfactory, but the lower storeys and the back rooms so dark that gas has to be burnt all day. The rents are higher than for the better accommodation provided by the Peabody and Pullen's dwellings.

Then there are the really bad blocks (dangerous in cases of fire : basements dark, damp and rat infested) where wash-houses and lavatories are in some cases shared by five families and where the standard of repair is very low.

CONCLUSION

More space has been devoted to the block dwellings in this borough than is usually necessary. These words of the Medical Officer of Health refer to the general housing situation in 1932, particularly as regards the large houses which are now occupied by several families :—

> " . . . large numbers of our citizens are huddled together in one or two-roomed dwellings in a most unhealthy and immoral manner. To me this is a most serious factor and one of the housing problems with which it is most difficult to deal. This state of affairs is one of grave concern, and calls for urgent and immediate action : the clearance of the slums will only touch the fringe, and will by no means eradicate overcrowding. The overcrowding in this borough is found chiefly in the larger and better houses, which, not many years ago, were occupied by single families. In some cases one finds that these have now been converted and let in flats, but more often they are taken as single dwellings by unscrupulous persons, who sparsely furnish and let each room to a family, irrespective of numbers, at exorbitant rents. This is the state of affairs with which we are battling daily in the Health Department with very little satisfaction or progress."

The need to plan the borough in a manner which will prevent further business expansion into areas which are properly residential has been stressed.

The northern belt, where conditions are now even worse than the figures indicate, owing to the mixing of small houses with big factories, should be reserved for the latter. The worst areas in other parts of the Borough should then be cleared.

It will be necessary to carry out this work on a large scale for the rehousing provided on cleared sites will have to provide for

1. The former inhabitants of the houses demolished on that site ;
2. People who must be removed from what should become the industrial zone ;
3. People to be displaced from overcrowded houses in other parts of the borough so that these may be reconditioned successfully.

10,230 people living at over 3 per room (assume average 4) have less than 2,600 rooms. They should have 6,820 and therefore require 4,250 more.

25,287 people living at 3 and over 2 per room (assume average $2\frac{1}{2}$) have 10,100 rooms. They should have 16,800 and therefore require 6,700 more.

36,042 people living at 2 and over $1\frac{1}{2}$ per room (assume average $1\frac{3}{4}$) have 20,600 rooms. They should have 24,000, and therefore require 3,400 more.

Minimum needs to abate overcrowding at over $1\frac{1}{2}$ per room are therefore 14,350 rooms, and maximum needs (if all overcrowded houses were unfit and no fit houses were overcrowded) would be 47,500.

Raising these by 25 per cent. in accordance with the general rule we get 18,000 and 59,500.

The geometric mean being about 32,500, it may be estimated that Southwark would need 9,000 houses to abate overcrowding at over $1\frac{1}{2}$ per room and to rehouse all those displaced from insanitary dwellings.

In view of the three considerations noted above, at least 10,000 are needed for the problem of Southwark housing to be *solved* and not merely made a little less urgent. The same figure has been arrived at by the Southwark Housing Association, which is at present conducting a fresh survey of the whole borough.

STEPNEY

GENERAL POSITION

Area			1,766 acres
Population	1921		249,657
	1931		225,238
Decennial decrease			24,419
1931	Persons per acre		127·5
	Number of private families		54,657
	Population in private families		214,061
	Structurally separate dwellings occupied		35,671
	(vacant		389)
	Rooms occupied		161,570
	Persons per room		1·33
1921-31	Decrease in occupied dwellings		1,113 or 3·03%
	Decrease in number of private families		1,175 or 2·10%
	Families per occupied dwelling	1921	1·52
		1931	1·53
	Average size of private family	1921	4·26 persons
		1931	3·92 persons
	Average number of persons per room	1921	1·45
		1931	1·33
	Persons living more than 2 per room	1921	68,921 or 29·0%
		1931	50,420 or 23·6%
	(Families living more than 2 per room	1931	8,204 or 15·0%)

1931	Persons living over 3 per room	15,952
	3 and over 2	34,468
	Total over 2	50,420
	2 and over 1½	47,909
	Total over 1½	98,329
	1½ and over 1	50,992

Acute Overcrowding

247 families living 6 or more in 1 room.
31 with 8 or more in 1.
1 with 10 in 1.

463 families living 8 or more in 2 rooms.
79 with 10 or more in 2.
10 with 12 or more in 2.

The number of persons living more than 3 per room decreased by about 1,300 in the period 1921 to 1931, but the proportion rose from 7·3% to 7·5%.

The Wards

Number of wards in the borough	20
Number of wards containing over all average of over 100 persons per acre	16
Number of wards containing over all average of over 80 persons per acre	19
Number of wards containing over all average of over 1 person per room	20
Number of wards containing over all average of over 1½ persons per room	3

Three Worst Wards on Persons Per Room Standard

	St. George in the East, South.	Shadwell.	Spitalfields, East.
Acreage	136	69	50
Population, 1921 ..	12,602	7,878	10,708
,, 1931 ..	11,455	8,225	9,265
Persons per acre ..	84·2	119·2	185·3
Private families ..	2,594	1,827	2,207
Population in private families ..	10,635	7,913	8,282
Structurally separate dwellings occupied ..	1,601	1,571	1,615
Rooms occupied ..	6,998	5,095	5,387
Persons per room..	1·52	1·55	1·54

Every ward in the borough has an over-all average of over 1 person per room, and seven show averages over 1.4. Apart from the three given above, these are the figures :—

St. George in the East, North-East ..	1·49
Limehouse, North	1·43
The Tower	1·43
St. George in the East, North-West ..	1·42
Whitechapel, East	1·39
Spitalfields, West..	1·39
Mile End, Old Town, Centre	1·38
Whitechapel, Middle	1·36
Ratcliff	1·34
Mile End, New Town	1·34
Whitechapel, South	1·29
Limehouse, South	1·28
Mile End, Old Town, West	1·28
Mile End, Old Town, South	1·20
Mile End, Old Town, South-East ..	1·19
Mile End, Old Town, North	1·17
Mile End, Old Town, North-East ..	1·13

GENERAL NOTES

The area between Mile End Road and Commercial Road is chiefly nineteenth century, some courts and alleys still remaining. But on the whole this is not as bad as the Spitalfields area.

The Spitalfields area is north of Whitechapel High Street, and contains very mixed property—warehouses and factories near the City, many of the old silkweavers' cottages remain, these are of the eighteenth century.

In the eastern part the houses are mainly about 50-75 years old. Some of the older ones are the former homes of the gentry, large and structurally good.

South of Commercial Road is full of alleys, and there are, of course, docks and warehouses on the river.

There is a very large number of lodging-houses in the borough.

It is almost impossible to pick out the "black spots" in Stepney. An L.C.C. official is reported to have said, "Practically all Stepney is a slum."

Whitechapel contains a large number of propped-up houses which are quite unfit for habitation. This is the worst part for decay and unfitness, but Shadwell and

Spitalfields show even more acute overcrowding.

Thousands of people are in the habit, in summer-time, of pulling their beds into the streets in order to escape from the bugs and get a little sleep.

It will be seen from the "General Position" table that the population, and the average size of the family, have decreased greatly since 1921, but that the decrease in the number of private families is only very slightly greater than the decrease in the number of occupied dwellings. The number of families per dwelling, therefore, shows a slight increase.

In the damp, overcrowded hovels which make up a great part of the housing of the borough rats abound, disease is rampant, the living and the dead have to be in the same room, the living and the dying in the same bed.

THE MILE END AREA

No building has been done in Mile End since the war, apart from the erection of a block of 18 flats put up by the Stepney Housing Trust—a private body.

In the opinion of the Trust the houses in Mile End are not fit for reconditioning. These houses were, of course, built for single family occupation, while many are now occupied by three. Many are verminous, many are dripping with water.

One large scheme in this area is now scheduled by the Borough Council.

An Example of Stepney Housing, from this area

Family of eleven in two rooms, each 10 ft. by 9, one up and one down.

No passages, cupboards or water closet—just two bare rooms.

Walls of downstairs room dripping.

The "bedroom" contains a double bed and a single bed, occupying the whole floor space. The mother and seven children sleep in this room at night.

The father, a night worker, sleeps there during the day.

Two boys sleep in the downstairs room, which is kitchen and living-room too.

The mother and several of the children suffer from tuberculosis.

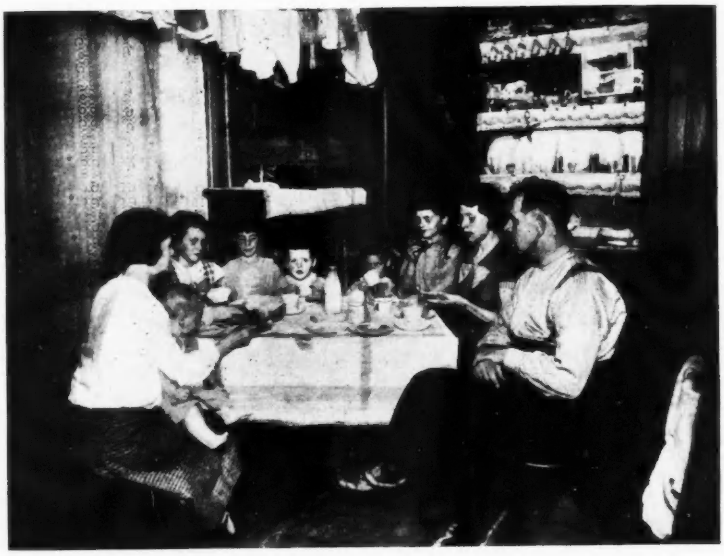
WORK OF THE COUNCIL

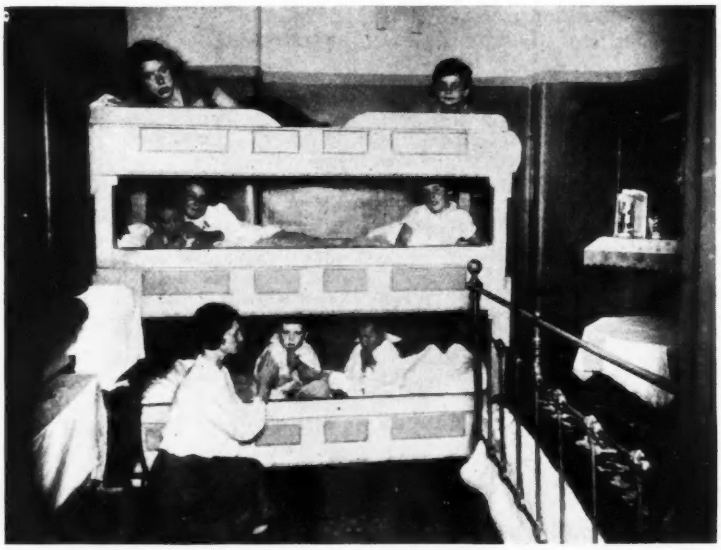
In 1932, 21,140 houses in the borough were examined for housing defects. 12,503 were found not in all respects reasonably fit for human habitation.

The 1930 Slum Clearance Plans involved dealing with 11 areas.

> The Borough Council scheduled 4 areas, and also 84 individual houses, for demolition (besides the Limehouse Fields Improvement Scheme embarked on in 1926 and still not completed).
>
> The L.C.C. hoped to deal with 7 areas before 1935.
>
> The Borough Council plans involved nearly 4,000 people.
>
> The L.C.C. plans involved nearly 10,000 people.
>
> The Limehouse Fields Scheme involved nearly 2,000 people.

A THREE-TIER BED





A family of twelve living in two small rooms at Poplar. The parents and eight children sleep in the room, approximately 10 ft. × 8 ft., shown in the photograph below. Seven of the children occupy a three-tier bed, built by the father, an unemployed tool-maker.

Owing to growing, and indeed accelerating, industrialization, it is very difficult to find a large area which could be cleared and on which a block of new dwellings large enough to rehouse people from other areas could be erected. A decanting site has, however, been obtained recently which will provide for 120 flats.

The list of areas submitted by the Borough Council to the L.C.C. in connection with this year's slum drive includes 34 clearance areas, involving nearly 2,600 houses.

The Market Buildings area is one of these. Twine Court has been described by the leader of the Borough Council as "one of the worst slums that could possibly exist anywhere."

Incomes and Ability to Move

The increase in the population of Dagenham from 9,000 to 90,000 in the years 1921 to 1931 probably leads many people to imagine that the worst problems of Stepney have been solved or are being solved by tenants moving to this vast outlying township.

Many families whose work and income make it possible for them to move to

Dagenham have of course done so. But 15·5% of the persons in Stepney live in poverty (New Survey of London Life and Labour), and it is, of course, these persons who are living in the worst housing conditions and are at present condemned inevitably to stay in such conditions.

What of "filtering-up"? The dwellings vacated by the families moving to Dagenham do in some instances serve to house the workers now living in intolerable housing conditions, but where such families do filter-up they generally have to go short on food, having to pay at least one-third of their incomes in rent.

More often the rents asked for on decontrol make it impossible for the families living in the worst courts and alleys to consider a move. The pressure of demand for workshops and other business premises is seen to be an added factor.

Families which have been rehoused on estates are in many cases suffering the direst want, owing to the fact that incomes adequate to satisfy the requirements of the L.C.C. have shrunk to unemployment benefit levels.

CONCLUSION

The acute overcrowding and poverty existing in Stepney, the foulness of housing conditions over a great part of the borough, have been described adequately. Here is the overcrowding picture and the conclusions as to housing needs which may be drawn from it :—

15,952 people living over 3 per room (assume average 4) have 4,000 rooms. They should have 10,650 and therefore require 6,650 more.

34,468 people living 3 and over 2 (assume average 2½) have less than 13,800 rooms. They should have nearly 23,000 and therefore require 9,200 more.

47,909 people living 2 and over 1½ (assume average 1¾) have less than 27,400 rooms. They should have nearly 32,000 and therefore require 4,600 more.

Merely to abate overcrowding at over 1½ per room therefore necessitates the provision of 20,500 rooms. Adding 25% to allow for the impossibility of rehousing at precisely 1½ per room gives over 25,000 rooms.

In the same way, if all the overcrowded houses were unfit, but no houses not overcrowded were unfit, some 82,000 rooms would be needed.

In the case of Stepney there is no doubt that owing to

1 : The ancient and insanitary character of the old courts and alleys, and the cottages generally ;

2 : The necessity to work in large areas—rather than by demolishing some 200 separate small clearance areas

the true figure for housing needs is at the very least 50,000 rooms—say 14,000 houses.

POPLAR

POPLAR BOROUGH COUNCIL

GENERAL POSITION

Area			2,331 acres
Population		1921	162,578
		1931	155,089
Decennial decrease			7,489
1931	Persons per acre		66·5
	Number of private families		38,901
	Population in private families		149,800
	Structurally separate dwellings occupied		23,340
	(vacant		221)
	Rooms occupied		120,000
	Persons per room		1·25
1921-31	Increase in occupied dwellings		276 or 1·20%
	Increase in number of private families		1,613 or 4·33%
	Families per occupied dwelling	1921	1·62
		1931	1·67
	Average size of private family	1921	4·19 persons
		1931	3·85 persons
	Average number of persons per room	1921	1·31
		1931	1·25
	Persons living more than 2 per room	1921	33,104 or 21·2%
		1931	30,102 or 20·1%
	(Families living more than 2 per room	1931	4,704 or 12·1%)

1931	Persons living over 3 per room	7,992
	3 and over 2	22,110
	Total over 2	30,102
	2 and over 1½	32,697
	Total over 1½	62,799
	1½ and over 1	36,548

Acute Overcrowding

127 families living 6 or more in 1 room.
18 with 8 or more in 1.
1 with 10 in 1.

193 familes living 8 or more in 2 rooms.
38 with 10 or more in 2.
4 with 12 or more in 2.

The number and proportion of persons living over 3 per room increased considerably in the period 1921 to 1931, the number increasing by some 1,850, the proportion from 3·9% to 5·3%.

> In one room there are a man, his wife, and five children between the ages of 9 and 1. There are two double beds and a table, which fill most of the room. When visited there was a large hole in the ceiling, with a bath and two buckets under it to catch the rain. The walls were verminous and the plaster falling in large patches.
>
> —*A typical case from a recent report.*

The Wards

Number of wards in the borough	14
Number of wards containing over all average of over 100 persons per acre	5
Number of wards containing over all average of over 80 persons per acre	8
Number of wards containing over all average of over 1 person per room	14
Number of wards containing over all average of over 1½ persons per room	nil

Three Worst Wards on Persons Per Room Standard

	Bromley North-East	Bromley South-West	Poplar East
Acreage	133	117	228
Population 1921 ..	11,900	13.994	10,096
" 1931	11,305	13.895	9.080
Persons per acre ..	85·0	118·8	39·8
Private families ..	2.479	3.262	2.344
Population in private families ..	10,021	13.804	8,735
Structurally separate dwellings occupied ..	1,782	1,908	1,838
Rooms occupied ..	7.436	9.378	6,519
Persons per room ..	1·35	1·47	1·34

Figures for the eleven wards not shown above are :—

Poplar, Millwall	1·32
Poplar, West	1·32
Bow, North	1·30
Bow, West	1·28
Poplar, North-West ..	1·28
Poplar, Cubitt Town ..	1·25
Bromley, Central	1·19
Bromley, South-East ..	1·17
Bromley, North-West ..	1·12
Bow, Central	1·07
Bow, South	1·07

GENERAL VIEW OF THE BOROUGH

Some houses are 150-200 years old, but most are 50-70 years old.

The chief type is two storeys—5 or 6 rooms—in rows. But there are a considerable number of larger houses.

A number of basements are used as dwellings ; many unfit.

Majority of houses hold more than one family, resulting in increased wear and tear.

A definite shortage of houses.

Between 1920 and 1930 the Borough Council erected 655 dwellings and converted a number of houses into 35 tenements.

The L.C.C. rehoused over 1,200 families on their estates in the years 1925-30.

There are practically no vacant sites.

Rehousing is possible only by previous clearance. Overcrowding is very high, but poverty and impossibility of living far from work make it impracticable to take very much action. 18 cases of overcrowding were abated in 1930 out of 95 reported—all of the latter were serious cases.

2,304 houses were visited by the house-to-house inspectors in 1929 and 1930.

16·6% of the families were overcrowded on the standard of over 2 per room, 23·5% on the basis of over 2½ per bedroom. (The closeness of the figures indicates that a large number of families must use all rooms for sleeping.)

The M.O.H. then considered that at least 5,000 families required accommodation if existing overcrowding was to be abated.

Poplar is the poorest borough in East London.

The "New Survey of London Life and Labour" finds 24·1% living in poverty.

"Black Spots"

The Devons Road area between Bow Road and Limehouse Cut is very bad indeed in all respects. This area comprises large parts of Bromley South-West and North-East Wards.

The Chinese quarter, centred by Pennyfields, is in the ward of Poplar West, just north of the West India Docks, which comprise most of the ward.

The Isle of Dogs forms the south-western part, in the big turn of the river.

West India Docks go almost straight across the north of the "isle" and of Cubitt Town.

Millwall Docks almost separate the Isle of Dogs from the land. Between the Docks and the river people live in conditions of acute overcrowding, damp, and decay.

CONDITIONS IN THE ISLE OF DOGS

A report by the well-known investigators, Mrs. Barclay and Miss Perry, is available respecting a number of properties in the Isle of Dogs. 173 houses were visited.

A street in Limehouse.

There are three general types of house—

- 3-room Cottages with a front door going straight into the kitchen and a staircase in the corner leading to two small bedrooms.
- 4-room Cottages with sculleries.
- 6-room Tenements.

The small, as well as the six-roomed cottages are occupied as tenements.

Built about 1850.

No damp-proof courses.

Walls thin and brickwork poor.

Many lower rooms below river level, liable to be flooded at high tide.

Some cases strong odour of damp earth and of dirty river water (Ingleheim Place).

Water permanently standing beneath floor boards of ground floor rooms (Laura Cottages, parts of Crewe Street).

Roofs of cheap slate, frequently in disrepair.

Many defective gutters and rain water pipes.

Porous walls.

In some cases *upper* rooms damp.

Many unfit for habitation.

Dampness the *worst* feature, but plenty of others :

General neglect of repairs—falling plaster, broken window sashes and cords, rotting and sometimes dangerous flooring, broken door frames, hinges and locks, defective grates and flues, w.c. pans and cisterns and coppers. . . . .

Overcrowding

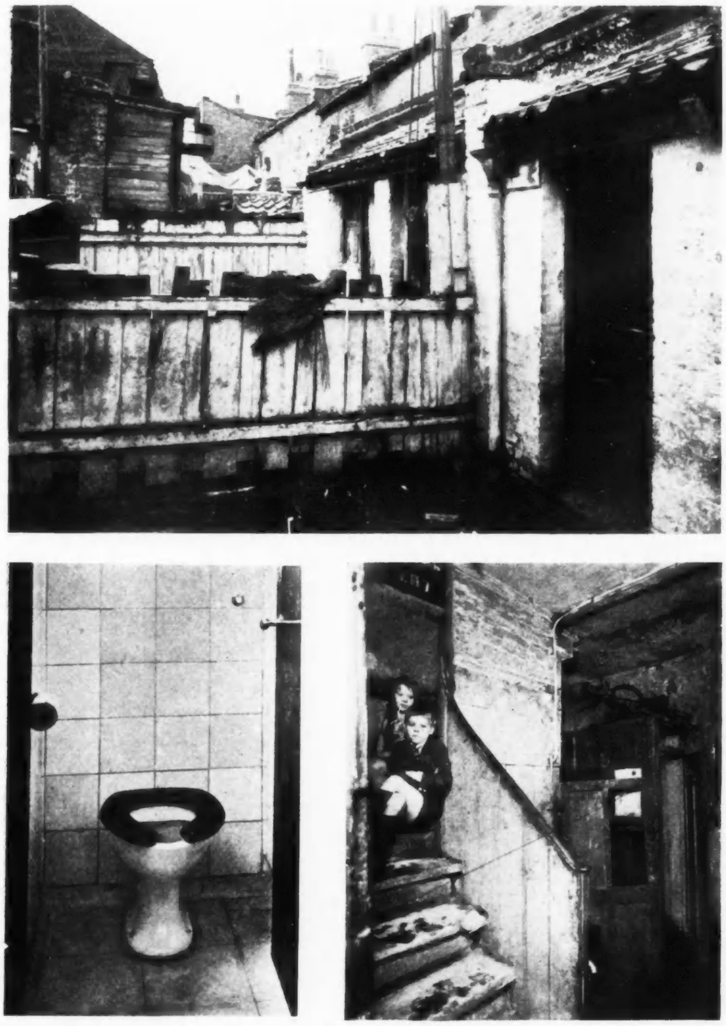
173 houses
348 families
1,481 people (1,165 over 10 and 316 under 10).

43% of the people visited were overcrowded on the Registrar General's standard.

It is to be noted that many small sculleries, since they are used for eating and/or sleeping, are counted as rooms.

"In three rooms there are a man, his wife, boys aged 16, 14, 12 and 3, and girls aged 10, 8, 6, 4 and 1. In one room there are a woman, boys aged 18 and 10, and a girl aged 7. As the ground floor back room is unsuitable for sleeping, the man, his wife and baby sleep in the ground floor front room ; the boys of 16, 14, 12, and 3 and girls of 10, 8, 6 and 4 all sleep in the first floor front room. All the rooms in the house are damp and very dilapidated. The roof leaks ; floor boards are broken ; fireplaces, doors and windows are defective. The walls

SANITATION



The sanitation in many London districts is still unbelievably primitive, and dirt and the spread of disease correspondingly hard to prevent.

The upper photograph taken in Limehouse in the borough of Poplar, shows a typical lavatory open to a back-yard—the only one available for a house full of people. In the photograph on the right a door is seen which leads to the unventilated common lavatory of another house; on the left is illustrated (for contrast) a hygienic modern w.c.

are verminous and plaster is falling in many places."

Ability to Move.

Rents and Incomes

Mostly part time or casual workers—many unemployed.

Rents for Poplar Borough Council flats:

Living room, scullery, bathroom and	2 bedrooms	12/6
,, ,, ,,	3 bedrooms	15/-
,, ,, ,,	4 bedrooms	18/-
,, ,, ,,	5 bedrooms	1/0/0

L.C.C. flats in Poplar ("simplified type")—more than one flat to each bathroom and scullery etc.

2 rooms 6s. od. and rates
3 rooms 8s. 6d. and rates.

On basis of not more than 2 per room, sex separation over 10, children under 10 counted as halves, one-fifth of average income considered available for rent (but travelling *not* taken into account) 31% of the families could afford one of the above.

Average rent in Isle of Dogs is about 3s. per room.

The proportion of families who could pay for enough rooms on their present rent basis, on same standards as above, is 46%.

The proportion of families unable to afford rent for any reasonable accommodation is 23%.

The area should undoubtedly be cleared. The people must be rehoused on the site.

RECENT HOUSING WORK

The Poplar Borough Council and the Isle of Dogs Housing Society have done something since the report on which this small description is based was written.

During 1930, 762 families in the borough were rehoused (618 by the L.C.C.), but no houses were found to be "in a state so dangerous or injurious to health as to be unfit for human habitation." Neither were any representations made with a view to making Closing Orders.

In his Report for 1930 the Medical Officer stated that "Owing to the shortage of accommodation for rehousing, little or no action has been taken in the condemnation of unfit individual houses, but since the coming into operation of the Housing Act, 1930, many unfit houses have been inspected with a view to dealing with them under that Act."

But in the 1931 Report the total number of new houses erected by the Borough Council during the year is given as 72, while 111 were in course of erection.

31 houses were found unfit during 1931 (4,856 not in all respects reasonably fit).

- 1 of these was demolished.
- 1 demolition order was quashed on appeal.
- 17 were dealt with as forming 2 clearance areas.
- 12 were represented to the L.C.C.

During 1932 the Council managed to complete several small schemes, 131 families being rehoused in newly-erected flats, and 3 in adapted dwellings.

It was still found impossible to take effective action in cases of serious overcrowding owing to the inability of overcrowded families to find fresh accommodation.

There are 30,000 people in Poplar overcrowded on the Registrar General's Standard.

And the "Isle of Dogs" is only one of many parts which are unfit for habitation.

CONCLUSION

7,992 people living over 3 per room (assume average 4) have 2,000 rooms. They should have 5,300 and therefore require 3,300 more.

22,110 people living 3 and over 2 (assume average 2½) have 8,850 rooms. They should have 14,750 and therefore require 5,900 more.

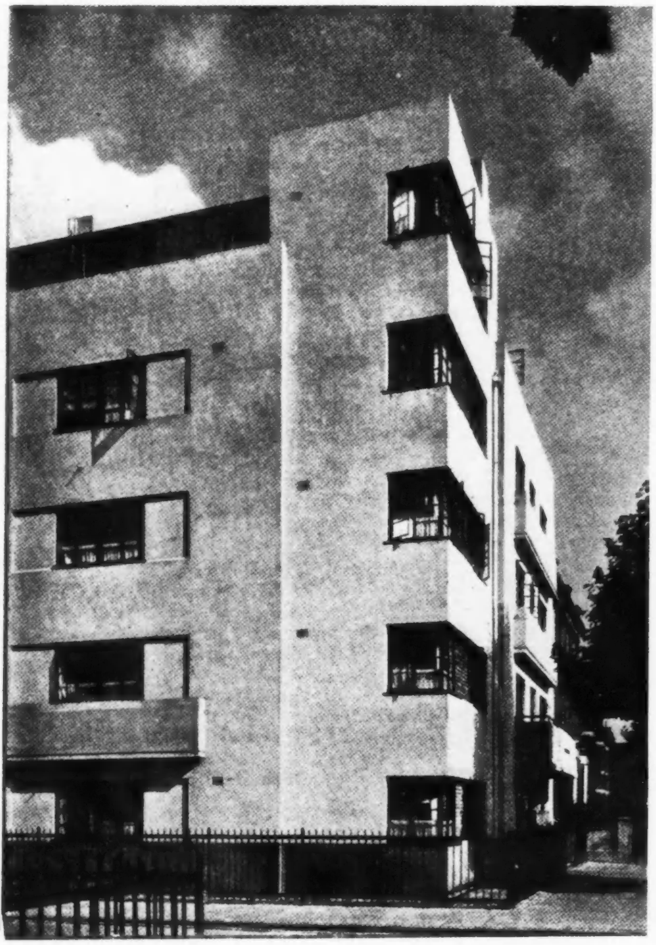
32,697 people living 2 and over 1½ (assume average 1¾) have 18,700 rooms. They should have 21,800 and therefore require 3,100 more.

Minimum requirements to abate overcrowding therefore appear to be 12,300 rooms. If all the rooms overcrowded were unfit—but no houses not overcrowded were unfit, the requirements would be nearly 42,000.

Raising these figures by 25% to allow for the impossibility of rehousing at exactly 1½ per room we get a minimum of nearly 15,500 rooms *merely to abate overcrowding*, and a maximum of over 52,000.

Following the usual method it appears that some 28,000 rooms are required, or say 7,000 houses. In view of the peculiarly insanitary nature of large parts of Poplar, and the necessity of rehousing on the site, the total requirements are probably 9,000, i.e. one family in four needs rehousing.

WHAT IS BEING DONE



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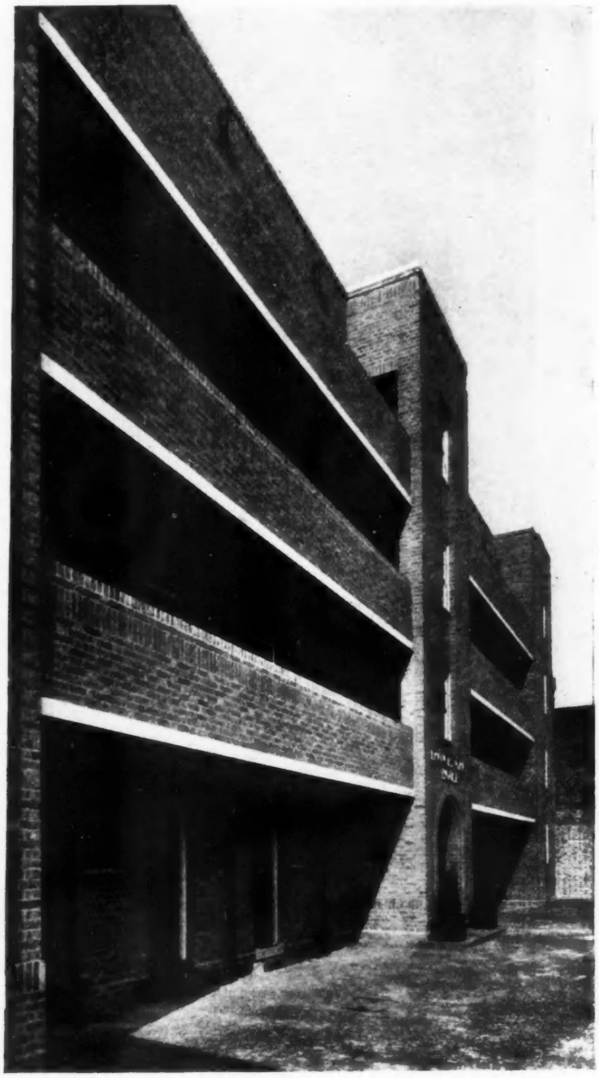

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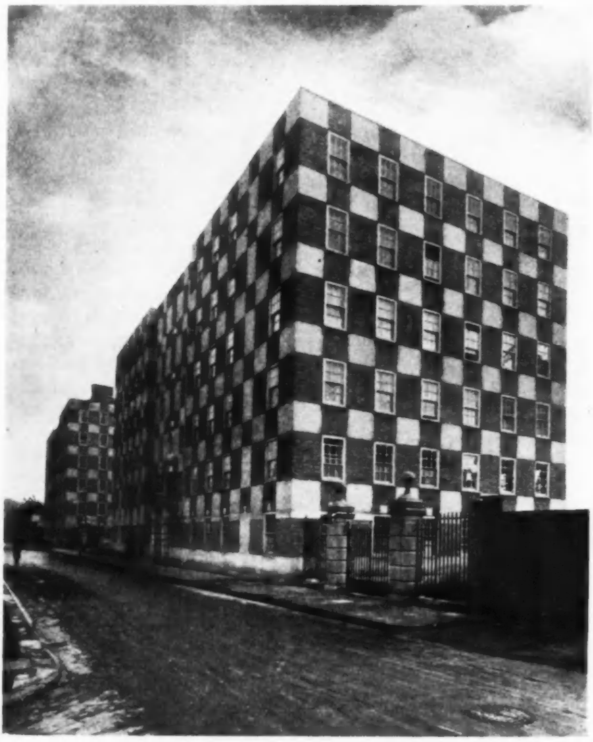


2

Three examples of working class flats in London, erected during the past four years. 1 : In Silchester Road, North Kensington (1933). Architect : S. Cameron Kirby. Rents weekly : 3-rooms, scullery and bathroom 15s. ; 4-rooms, scullery and bathroom 18s. Rebates are given to the tenants, consideration being taken for the number of children and the earning capacity of the tenants : In many cases this reduces the rents very considerably. 2 : The Grosvenor Housing Estate, Millbank (1929). Architect : Sir Edwin Lutyens, R.A. Rents : 1-room 5s. ; 2-rooms 9s. ; 3-rooms 12s. ; 4-rooms 16s. 3 : Frances Gray House, Stepney (1933). Architects : Mitchell and Bridgwater. Rents : 2-rooms 10s. 6d. ; 3-rooms 14s. : 4-rooms 17s. ; 5-rooms, 20s. The rents for the last example include rates, which, for the Borough of Stepney, is 13s. 8d. in the £.

ST. PANCRAS

GENERAL POSITION

Area			2,694 acres
Population	1921		211,366
	1931		198,133
Decennial decrease			13,233

1931	Persons per acre		73·5
	Number of private families		56,929
	Population in private families		178,341
	Structurally separate dwellings occupied		24,980
	(vacant		349)
	Rooms occupied		158,489
	Persons per room		1·13
1921-31	Increase in occupied dwellings		320 or 1·30%
	Increase in number of private families		276 or 0·49%
	Families per occupied dwelling	1921	2·30
		1931	2·28
	Average size of private family	1921	3·45 persons
		1931	3·13 persons
	Average number of persons per room	1921	1·22
		1931	1·13
	Persons living more than 2 per room	1921	43,687 or 22·4%
		1931	31,402 or 17·6%
	(Families living more than 2 per room	1931	5,521 or 9·7%)
1931	Persons living over 3 per room		9,010
	3 and over 2		22,392
	Total over 2		31,402
	2 and over 1½		34,234
	Total over 1½		65,636
	1½ and over 1		37,619

Acute Overcrowding

95 families living 6 or more in 1 room
9 with 8 or more in 1.
None with 10 in 1.

274 families living 8 or more in 2 rooms.
52 with 10 or more in 2.
7 with 12 in 2.

The number and proportion of persons living more than 3 per room decreased between 1921 and 1931, the number by nearly 3,000, the proportion from 6·1% to 5·1%.

The Wards

Number of wards in the borough	8
Number of wards containing over all average of over 100 persons per acre	4
Number of wards containing over all average of over 80 persons per acre	6
Number of wards containing over all average of over 1 person per room	7
Number of wards containing over all average of over 1½ persons per room	nil

Three Worst Wards on Persons Per Room Standard

	No. 2	No. 5	No. 6
Acreage	162	342	180
Population 1921 ..	21,779	30,124	20,570
,, 1931 ..	19,675	28,741	18,000
Persons per acre ..	121·5	84·1	100·0
Private families ..	5,416	8,605	4,386
Population in private families ..	18,934	26,314	15,621
Structurally separate dwellings occupied ..	2,270	3,116	2,246
Rooms occupied ..	14,659	21,765	10,614
Persons per room ..	1·29	1·21	1·47

The four other Wards with over all averages of over 1 person per room are :—

No. 8	1·17
No. 4	1·14
No. 3	1·10
No. 7	1·10

GENERAL VIEW OF THE BOROUGH

> "Housing pressure as measured by the proportion of families to dwellings is greatest in St. Pancras, where there are on the average 2·28 families to each dwelling and where only 18·4% of the families are in undivided occupation of separate dwellings."
> *(From the London Volume of the 1931 Census.)*

> "Boys and girls of all ages sleeping with their parents, without any privacy at any time; men on night duty with no place to sleep during the day save where the children feed, or the wife is confined, or a member of the family lies ill; damp rooms and dark basements, where lack of sunshine undermines the healthy and aggravates the condition of the less strong—these are the conditions."
> *(Ian Fraser, M.P., North St. Pancras, and others. Letter to "The Times," August 3, 1933.)*

St. Pancras is a very mixed borough. It stretches from the northern boundary of London (Ken Wood) almost into the centre of London. The southern boundary skirts Mount Pleasant (which is in Finsbury), crosses Gray's Inn Road, and runs along Guilford Street. It then turns north, then again west, emerging from Francis Street to Tottenham Court Road. A long tongue stretches down the west side of Tottenham Court Road, so that the borough includes part of the "northern Soho." The western boundary runs west of Tottenham Court Road, along the Broad Walk, across Primrose Hill, to Chalk Farm Station, thence almost directly north to Ken Wood. The eastern boundary runs from Waterlow Park, near the Caledonian Market, along York Road and down King's Cross Road to Mount Pleasant.

Good property is to be found in the squares and streets adjoining the Foundling Site, in Primrose Hill and fronting on the Zoo and in the northern part of the borough.

Almost half the area of Ward No. 6 is composed of the railway stations of St. Pancras and King's Cross, and of depots and the gasworks adjoining. The remaining half of this ward is Somers Town, a working-class residential area.

Ward No. 2 contains the greater part of

what is called Kentish Town—residential working-class and small shop property and workshops make up the great part of this area.

Ward No. 8 contains a number of insanitary basements, some entirely below street level with gratings as the only means of obtaining light or air. The streets in this ward are "going down" very rapidly—some have gone. Sidmouth Street and other streets in the vicinity are overcrowded. Sidmouth Mews consists of two-storey houses, of which the ground floors are workshops, etc. The rooms are unfit. Most of the houses in the ward are still structurally sound, but many would need considerable repairs and reconditioning to be made properly fit for habitation. Also ;they are very overcrowded in several streets, so that the provision of new dwellings would be an essential accompaniment to the reclamation of the old.

The Tenement "System"

"With the exception of a relatively small number of blocks of self-contained flats, the greater part of the working-class accommodation in the borough consists of tenement houses, and the drawbacks associated with this form of housing are well known. Most of these houses are old, and, owing to age and the rough usage associated with numerous tenants, frequent inspections and the service of many notices are required to keep them in anything like suitable condition. . ."

"The type of tenement house usually found in the borough is a rather large single-fronted terrace house, generally of three or four storeys, but also having a more or less underground basement. Each floor usually has two rooms, one in front, the other at the back, and although there are many single-room tenements, as a rule each floor of two rooms is occupied by one family."

(*Annual Report of the Medical Officer of Health.*)

The tenement system obtains over the greater part of Wards 6, 2 and 8, though in Somers Town many large blocks of flats have been built to replace the insanitary hovels formerly lying along Ossulton Street and adjoining streets.

WARD 2

This ward has the lowest infantile mortality rate in the Borough. It has been suggested that this is due to its proximity to open spaces.

Most of the working-class houses are of six rooms, with a scullery in addition on the ground floor, and a communal wash-house and lavatory in the small backyard; most contain a family on each floor. One-room lettings are, of course, not unknown. Damp-proof courses are rare, and many basements suffer from rising damp and are unfit for habitation.

Overcrowding and high rents are the main results obtained from recent survey of this ward. The state of repair varied greatly according to the landlord—on the whole it was fairly good. External neglect was most noticeable in Weedington Road and Litcham Street.

The bad areas, in the opinion of the authors of the survey, are those bounded by

Weedington Road, Dickinson Street, Wilkin Street and the yards of Prince of Wales Road.

Warden Road, Weedington and Wilkin Streets (this includes Litcham Street, where the North St. Pancras Group has started work).

Also

parts of Herbert Street and Chaston Street, an island site, including St. Silas Street, Marsden Street and Malden Road.

Crown Place, Raglan Place and Spring Row.

Newberry Mews.

Description of Newberry Mews

". . . approached by a narrow entrance under shop property in Malden Road, and opens out into a long narrow mews property of an old and dilapidated kind. The rooms over stables are occupied in many instances by families, and some of them complain that offensive smells invade their rooms. The whole place is indescribably dreary and sordid and the yard is generally littered with rubbish. The whole of this property should be cleared away."

Overcrowding in the Houses Visited in this Area

Houses Visited ..	249	
Number of Families ..	495	
Rooms Occupied ..	1,350	
Number of Persons ..	3,041	(454 being children under 10)
Persons per Family ..	6·2	
Rooms per Family ..	2·7	
Persons per Room ..	2·25	
Families per House ..	2·0	
Overcrowded on Registrar General's Standard	79	families (16% of all families visited)
Bedroom standard of more than 2 adults per room, assuming father and sons sharing one room, mother and daughters the other, as well as on Registrar General's ..	73	families (15% of all families visited)
Overcrowded on these standards and mixing of sexes among adults in bedrooms ..	14	families (3% of all families visited)

Overcrowding and General State of Houses—Examples from the 249 Houses Visited

9-room cottage—4 rooms very small.

9 families, 36 persons (25 being adults).

Some of the ceilings very low.

No gas laid on.

Some of the rooms extremely dark, involving burning oil lamps all day.

Smells arising from manhole outside front of house.

3 w.c.'s. in the yard—for the 9 families.

2 taps—for the 9 families.

"This is an instance of a whole house that is neglected by its owner. Bitter complaints were received at the landlord's failure to carry out repairs. The tenant who rents the ground floor and first floor back addition room pays 16s. 6d. for three rooms and a small kitchen. He stated that the ground floor front and the ground floor back rooms have not been redecorated for twelve years. The first floor back room was very verminous and had recently been redecorated under sanitary orders. The walls of the room were damp and when visited were running with water. It is suggested that the cause of this is rising damp as well as worn-out brickwork. Certain work has been carried out under Sanitary Inspector's orders, but to no effect. In this instance the wife is tubercular and the tenant is anxious to move away. The home is beautifully kept and well furnished.

"In the remainder of the house there are various defects, especially the window arches and sills; defective arches cause water to penetrate into the rooms. This is noticeable over the window in the first floor front room. The tenants in these rooms have lived there for five years and pay 13s. 6d. for two rooms. They state that during that time their rooms have not been redecorated.

"The owner was buying the house through a building society, but failed to keep up his payments. The tenants were ordered to pay their rents to agents (presumably for the building society)."

"This . . . is a case of rat trouble. The tenants say the rats come through holes at the back of the kitchen grate and they feel nervous about leaving the baby alone in the room."

". . . a family of nine occupying two miserable interconnecting rooms on the ground floor. The front room was an old shop and does not contain a fireplace and is verminous. There is no door between the two rooms, as the original door has been removed and placed over the old shop entrance to help eliminate the draughts. The rooms are damp and draughts acute. The tenant's wife said that owing to the damp 'the beds go mouldy.' The eldest daughter has had rheumatic fever and has been nine months in hospital.

"The family consists of the mother (a widow) and eight children . . . the back room, approximately 11 ft. by 11 ft., is almost entirely occupied by three beds . . .

"The mother said the children were always ill and that the girl of thirteen was at home with tonsilitis. She is anxious to move and feels she could afford more rent than she pays at present (8s. 2d.)."

Rents

Rents in the area are not excessive in controlled direct tenancies.

But sub-lets, furnished tenancies and decontrol mean, in general, extortionate rents.

A few examples given show a range of 12s. 6d. to 15s. for decontrolled houses, while similar controlled accommodation was 7s. to 10s. 6d.

Incomes and Ability to Move

The great majority of the inhabitants must live near to the centre of London. Many are shift workers with changing shifts, Covent Garden workers, waitresses, office cleaners, railwaymen, tram drivers, and so on.

Particulars of incomes were obtained from 148 families. The average income was 62s. per week (in 47 cases the main wage-earner was unemployed).

Assuming 20 per cent. of income can be spent on rent and allowing for minimum number of rooms on basis of Registrar General's Standard:

29 families could afford a Council flat.

119 could not.

The "average family" (of the 148) could pay 12s. rent.

The average number of persons per family (of the 495) was 6·2.

More than half of the families would require three bedrooms on the Registrar General's Standard, considerably more on a 1½ per room standard, with provision for sex-separation over 10 years of age, and a bedroom for husband and wife.

The investigators' note:

> "Up to the present there has been no solution found by the authorities to this stupendous problem . . . the provision of three-bedroom flats in London at an inclusive rent not exceeding 12s. per week."

And if there were found such a solution, it is clear from the above that since the average family could just afford 12s., about half the families could not. The discovery of a means of reducing the cheapest rents for good accommodation by 33⅓ per cent. would still leave half the inhabitants of overcrowded and slum houses similar to those investigated unable to pay for the accommodation they need.

WARD 6

Conditions in Somers Town have been vastly improved in recent years—the L.C.C., the Borough Council and the St. Pancras House Improvement Society having devoted great attention to that part of the borough.

But Ward 6 is still by far the most overcrowded, a figure of 1·47 persons per room over all average compares with 1·29 for the ward described above.

Somers Town is not yet decently housed, though the combined efforts of the two authorities and the Society have ameliorated conditions greatly. There are still damp and insanitary basements, particularly in Drummond Street and Crescent and in that vicinity; there are still verminous houses, tenements without food storage or proper sanitary accommodation; there is still terrible overcrowding.

CONCLUSION

Despite the achievements noted above, there are in St. Pancras:

9,010 people living over 3 per room (assume average 4). They have 2,250 rooms and should have 6,000. They therefore need 3,750 more.

22,392 people living 3 and over 2 (assume average 2½). They have 8,950 rooms. They should have 14,950, and therefore need 6,000 more.

34,234 people living 2 and over 1½ (assume average 1¾). They have 19,550 rooms. They should have 22,800, and therefore need 3,250 more.

Minimum housing needs, on this analysis, if every house in the Borough were fit for habitation, would be 13,000 rooms. This figure must be raised by 25 per cent. to allow for the impossibility of rehousing at precisely 1½ per room—to 16,250.

If all the overcrowded houses were unfit the number of rooms required would, similarly, be more than 54,500. Taking the geometric mean of these figures gives about 29,000 rooms—say 8,000 houses—as the full requirements of the borough.

KENSINGTON

GENERAL POSITION

Area			2,290 acres
Population	1921		175,859
	1931		180,677
Decennial increase			4,818
1931	Persons per acre		78·9
	Number of private families		47,713
	Population in private families		158,491
	Structurally separate dwellings occupied		28,999
	(vacant		1,249)
	Rooms occupied		197,256
	Persons per room		0·80
1921-31	Increase in occupied dwellings		1,193 or 4·29%
	Increase in number of private families		4,712 or 10·96%
	Families per occupied dwelling	1921	1·55
		1931	1·65
	Average size of private family	1921	3·68 persons
		1931	3·32 persons
	Average number of persons per room	1921	0·81
		1931	0·80
	Persons living more than 2 per room	1921	26,456 or 16·7%
		1931	19,985 or 12·6%
	(Families living more than 2 per room	1931	3,462 or 7·3%)
1931	Persons living over 3 per room		5,443
	3 and over 2		14,542
	Total over 2		19,985
	2 and over 1½		22,174
	Total over 1½		42,159
	1½ and over 1		24,407

Acute Overcrowding

58 families living 6 or more in 1 room,
5 with 8 or more in 1,
none with 10 or more in 1.

150 families living 8 or more in 2 rooms,
21 with 10 or more in 2,
2 with 12 in 2.

The number and proportion of persons living more than 3 per room decreased during the period 1921 to 1931, the number by about 2,850, the proportion from 5·2% to 3·4%.

The Wards

Number of wards in the borough	9
Number of wards containing over all average of over 100 persons per acre	3
Number of wards containing over all average of over 80 persons per acre	4
Number of wards containing over all average of over 1 person per room	3
Number of wards containing over all average of over 1½ persons per room	nil

Three Worst Wards on Persons Per Room Standard

	Golborne	Norland	St. Charles
Acreage	113	195	400
Population 1921 ..	26,329	22,106	24,268
1931 ..	23,682	21,620	28,991
Persons per acre ..	209·6	110·9	72·5
Private families ..	6,390	6,221	7,709
Population in private families	23,365	20,966	27,583
Structurally separate dwellings occupied	2,107	3,161	4,113
Rooms occupied ..	15,653	19,396	25,478
Persons per room ..	1·49	1·08	1·08

INFANTILE MORTALITY

The infantile mortality rate shows a great increase over the last three years, the rate having risen from 69 in 1930 to 76 in 1931, and 98 in 1932.

THE ROYAL BOROUGH

The general impression conjured up by the word "Kensington" is that of a rich district lying immediately to the south and west of Kensington Gardens. But Kensington has altogether nine Wards, and stretches round the west of Paddington to the boundary of the L.C.C. area; five of the Wards are "upper class," four are mainly working-class, and one of these is among the half-dozen most overcrowded Wards in London on the persons per acre standard.

This is the

Golborne Ward.

which adjoins the Westbourne Ward of Paddington. This Ward earned the distinction of a special mention in the introductory notes in the London volume of the Census, where it is stated that

> "Kensington, owing to the presence of its notorious Golborne Ward, ranks as the twelfth worst or the eighteenth best in the series, with 12·6% overcrowded."

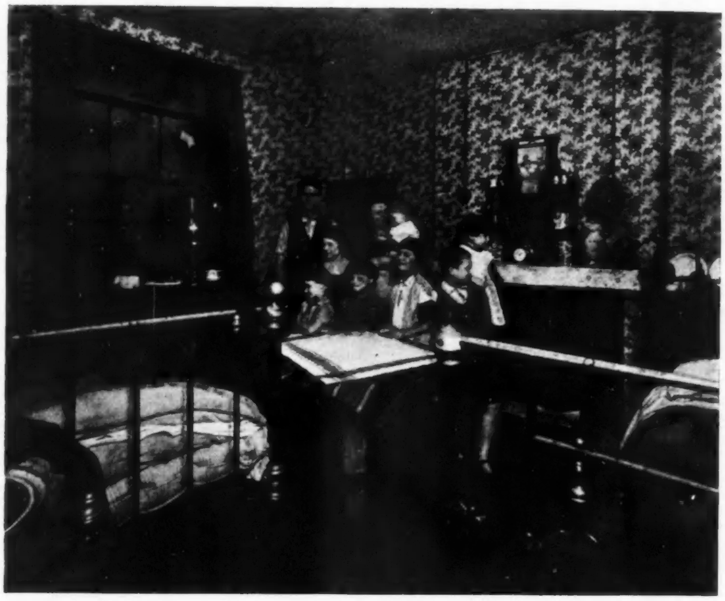
The whole ward is densely crowded, but the worst part of all is just north of the railway line—Southam Street, Golborne Gardens and Bosworth Road being the real "black spots."

The Rest of North Kensington

St. Charles Ward, in the north-west, stretches to the Willesden boundary, and the north of this Ward is newly developed—containing the Sutton Trust Estate and the St. Quentin Estate of the Borough Council, besides some middle-class post-war houses. In general it is working-class in the southern part.

Norland Ward is mainly poor and contains many areas as bad as those in Golborne. There are, however, a few large houses and squares of the South Kensington type.

A BASEMENT DWELLING



One room in the basement of a dwelling in West Kensington, occupied by nine persons—father, mother and seven children. The family live, eat and sleep in this room. The only ventilation is a grating in the pavement area, above the window. It is so dark that an oil lamp has to be burned all day.

Pembridge Ward is mixed. There are many insanitary basements in the vicinity of Portobello Road, a shopping street running from north to south, and the area contains many mews dwellings.

Infantile Mortality and Disease Rates in the Two Parts of the Borough

The Medical Officer of Health, in his 1931 report, gave figures illustrating the comparative health of the North and South divisions of the Borough.

	North Kensington	South Kensington
Infantile mortality rate per 1,000	86	44
Scarlet fever	299	86
Diphtheria	172	50
Tuberculosis, deaths ..	105	43
Puerperal fever and Pyrexia	51	18
Pneumonia	213	40
Acute Rheumatism (under age 16)	43	3

In 1932 the infantile mortality rate for the borough as a whole reached 98, a figure only exceeded in London by Paddington. The rate for North Kensington was 116 (a rise of 30), for South Kensington 54 (a rise of 10). The four Wards of North Kensington show the following increases :—

	1932	1931
St. Charles	109	76
Golborne	112	97
Norland	142	84
Pembridge	120	92

N.B.—The highest *death-rate* (and the largest increase) is in the Golborne Ward, despite the fact that the inhabitants of the southern part of the Borough must show a high age average.

Mews Dwellings

Mews dwellings are very much more numerous in South Kensington than in North Kensington (1,400, as against less than 700), but those in North are worse.

Indeed, the mews dwellings in the southern part of the Borough are largely inhabited by chauffeurs, who have their cars in the garages below, or by people of the upper or middle classes, in which case they have been reconditioned thoroughly.

In North Kensington the mews dwellings are largely tenanted by costers, and many are dilapidated and insanitary. The rooms are low and improperly ventilated. The approach is generally by a steep staircase from the stable or garage, which in many cases house rats.

Basements

Over 5,000 people in the Borough live in basements entirely below street level. There are some 10,000 in basements with front area 3 feet wide or less—these number 1,200.

There are 13,000 basements altogether.

CONDEMNED AREAS

The Five-Year Programme drawn up by the Borough Council in October, 1930, included the clearing of the Talbot Mews area and the Barker Street area. So far the Council has only provided 20 flats in connection with the clearance plan, and in 1932 no new accommodation was provided. The former of the above schemes is being proceeded with. The area is almost derelict now. The Barker Street area has not yet been tackled—it will be one of the first areas to be cleared under the

New Five-Year Programme

which includes 7 clearance and 7 improvement areas and provides for the rehousing of more than 3,000 people.

Barker Street

Barker Street is a 16–20 foot alley approached under a house in the Fulham Road. It consists of 16 houses. Eight of these are subdivided into six half-floor "flats" each. Seven consist of one-floor dwellings over stables.

The average number of persons per room is at least 1·5—probably more.

The "flats" each consist of three connecting rooms. No cupboards. No wash-houses. Water supply and w.c. on each floor, but not a sink on each floor.

All the houses are verminous. "Some of the tenants make ceaseless efforts to destroy the bugs, using strong spirits and paint on the walls, but the ventilation of the rooms is so bad that there is no hope of success."

The Medical Officer of Health described the alley in his 1930 report; the area is soon to be dealt with.

WORK OF THE KENSINGTON HOUSING ASSOCIATION

In October, 1929, the Kensington Housing Association had before them 1,672 applications for better accommodation.

Using extremely stringent classification on visiting, the Association divided the applications as follows:—

Very Urgent.

(Where 1. All rooms used for sleeping, boys and girls over 10 sharing a room, or parents having to sleep apart. Where there is less than 300 cubic feet of air per person per bedroom or 400 cubic feet if also living room. (Children under 10 count as half, so man, wife and three children in one room 12 ft. by 12 ft. by 10 ft. would not be a "very urgent" case.)

or 2. Rooms are condemned as unfit for human habitation.

or 3. Rooms are injurious to health.

or 4. Eviction or prosecution for overcrowding threatened.)

514

Urgent.

(Slightly better than above, children younger, rooms larger, etc.)

218

Ordinary.

(In need of other accommodation, but able to wait their turn.)

342

1,074

The remainder had moved away, found other accommodation, withdrawn application, etc.

Out of the 1,074 families it was only possible during that year to find accommodation for 177, i.e., about one-third of the "Very Urgent."

Leaving 897.

During the year 1930-31 this number was reduced by 121 to 776.

On September 30, 1931, there were still 327 Very Urgent, 163 Urgent and 286 "Ordinary" Families on the list—of the original applicants.

There were also another 101 likely to be "Very Urgent," since only families likely to be so classified were added to the list.

So that for two years 327 of the 514 Very Urgent cases had remained "Very Urgent."

Of the 121 families which found accommodation in 1930-31 the Kensington Housing Trust took 59.

Here are the conditions in which two of these 59 families, now rehoused in new blocks, were previously living:—

> "Three girls aged 13, 11 and 10 and their parents were living in two miserable basement rooms in one of our worst streets. The children slept in a room which had been condemned by the sanitary inspector. The whole place was overrun with rats and slugs. In spite of all this the home was tidy and clean. . . ."
>
> "In one home, not easily forgotten, beds for the parents and five children were crowded in a bedroom lighted but certainly not ventilated by a skylight . . . entirely without through ventilation. School-teachers complained that the children from this home seemed always half asleep. In a slip of a room used as a kitchen the family had their meals in relays as there was not room for all to sit down at once."

A year later, during which time some 40 to 50 cases of desperate urgency were added to the list there were 626 families waiting—244 of them being "Very Urgent."

The number of very urgent cases was therefore reduced by 184 during the year. It is not to be assumed that the difference between these two figures represents the number satisfactorily rehoused during the year, since many families which could not be traced may have moved to worse, just as well as to better, accommodation.

It is stated that *during the year* 23 families were taken by the Improved Tenements Association, the Sutton Trust, the Aubrey Trust, the Borough Council, the L.C.C. or other housing bodies, and 14 by the Kensington Housing Trust.

The figures for those taken by the Borough and County Councils are apparently not large enough for separate mention!

MR. HOWARD MARSHALL IN KENSINGTON

> "It was just off Ladbroke Grove that I saw my first room there—a basement. The husband, ironically enough, was an unemployed builder. . . . Father, mother, and son slept in one bed, the baby in a cot, two small children on a very small collapsible bed, and another boy on a chair with his feet on this bed."
>
> ". . . basements in the Portobello Road. One I saw there took its only light and air through a grating in the pavement about a yard long and a foot across. The room was pitch dark, gas had to be burnt all day, and cost a shilling a day, and it was so damp that clothes in a chest of drawers were wringing wet. Incidentally there were five families in this house—approximately thirty people—with one working water-closet."
>
> "Sewage water comes into some of these cellars, forced back from the sewers."

SOME EXAMPLES OF BAD OVER-CROWDING FROM A RECENT SURVEY

> "Two basement rooms, the back one damp and dark. The family here is a husband and wife, a boy of 13, and girls of 11, 10, 8, 5, 3, and 1—nine persons. The tenant has regular work and an average wage of £3 5s. per week. He wants open air and a garden, and is anxious to go to an outlying L.C.C. estate if he can have a cottage at a rent within his means, but 15s., with the extra fares, would be his limit. . . ."
>
> "In two rooms on the ground floor live a husband and wife, girls aged 16, 14, 5 and 4 months, and boys aged 8 and 3—eight people. The husband and wife and baby sleep in the front room *and all the other boys and girls in one bed in the back room,* which is small and dirty and has to be lighted by an oil lamp. . . ."
>
> "In three rooms on the ground floor . . . live a husband and wife, two daughters, and five sons aged 20, 18, 16, 13 and 6 years—nine people. The front room is a converted shop with a wooden front—cold and draughty—and the third room—a "slip"—is so small that it cannot be used as a bedroom. The daughters therefore sleep in the same room as their parents." (The five boys apparently sleep behind the wooden converted shop front.)
>
> "In one room (14 feet by 10 feet) is a man and his wife and six children. The two eldest children sleep out. This family has made every effort to find other accommodation, so far without success."
>
> "There is a small lobby used as a kitchen, a living-room, and a very small bedroom lighted by a skylight. In this place live a husband and wife, five adult sons, and a grandson of 10, two adult girls (a daughter and a niece), and a little girl of 3—eleven people. The rooms, when visited, were clean and tidy in every particular. . . ."

Many of the people described in these and similar dwellings are able and willing to pay rents of about 10s. or 12s. Accommodation in the vicinity is frequently imperative, however, and this is the great difficulty.

RENTS

In North Kensington:

Average controlled rents are about	6/- for 1 room
	9/- for 2 rooms
	11/- for 3 rooms
	15/- for 4 rooms

Decontrol generally results in disgraceful profiteering, while the charging of key-money, which is illegal, is not unknown.

Furnished Rooms

"Furnished" rooms are always used as a means of exacting great rentals from the working-class.

A house is reported of which the rateable value is £63, while five families each pay 18s. per week for one room. It must be noted that the investigators say that the furniture was adequate and that the use of light and hot water was included in the rents.

But in many other instances the word "furniture" is a mockery.

Ability to pay higher rents

A large proportion of the people living in the poor Wards of North Kensington are not in receipt of fixed incomes.

This, with the high rents, inevitable in a fairly central area, is a profound cause of their conditions.

Some 400 to 500 families were investigated in connection with the above survey, but only 171 were able to furnish reliable income figures, and therefore such figures as exist give an impression of a far higher average than the true one.

Of the 171 families, it was found that 18 families inhabited a dwelling which gave either one or two rooms in excess of bye-law standards, 124 were *at* a standard of accommodation which involved no violation of bye-laws as to cubic space or sex separation and allowed, too, for husband and wife occupying same bedroom. 29 families were below such a standard to the extent of one or more rooms.

It is to be noted that all rooms are used as bedrooms. If allowance were made for a separate living-room only three would be above standard, 15 at it, and 153 below.

The sample was taken from different parts of Kensington.

The result of the investigation shows that 17% of the families were in very urgent need of more rooms, since their conditions involved either the mixing of the sexes or its avoidance only by separation of husband and wife.

72% more were in great need of more rooms, since they only kept within the bye-laws by there being no empty rooms at night.

Only 11% had a room free at night.

76% were overcrowded on the Registrar General's Standard.

The income investigation showed that less than half of the families could afford a modern dwelling of the number of rooms necessitated by their respective sizes.

CONCLUSION

The slum clearance schemes contemplated by the Borough Council provide for rehousing over 3,000 people.

Also the powers lately gained in respect of the closing of basements, if it is possible to utilize these, will provide a means of dealing with the insanitary parts of houses which cannot be condemned outright.

These bye-laws will prove of great utility in connection with reconditioning work.

But the true needs of Kensington form a far greater problem than the immediate one which the Borough Council hopes to solve.

5,443	people living over 3 per room (assume average 4) have 1,350 rooms. They should have over 3,600, and therefore require over 2,250 more.
14,542	people living 3 and over 2 (assume average 2½) have 5,800 rooms. They should have nearly 9,700, and therefore require nearly 4,000 more.
22,174	people living 2 and over 1½ (assume average 1¾) have 12,700 rooms. They should have 14,700, and therefore require 2,000 more.

The housing needs of the borough in respect of overcrowding alone therefore appear to amount to 8,250 rooms. And this figure must be raised by 25% to allow for the impossibility of rehousing all families at exactly the 1½ per room standard.

The provision of 10,000 rooms, say 2,500 houses, to accommodate about 12,500 people, is necessary for the abatement of overcrowding alone.

Under the method usually adopted, the figure for rooms required if all overcrowded houses were unfit would be 35,000, making total requirements about 19,000 rooms, or say 5,500 houses.

In view of

1: The existence of 13,000 basements, nearly 2,000 of which are entirely underground or with front areas less than 3 feet wide;

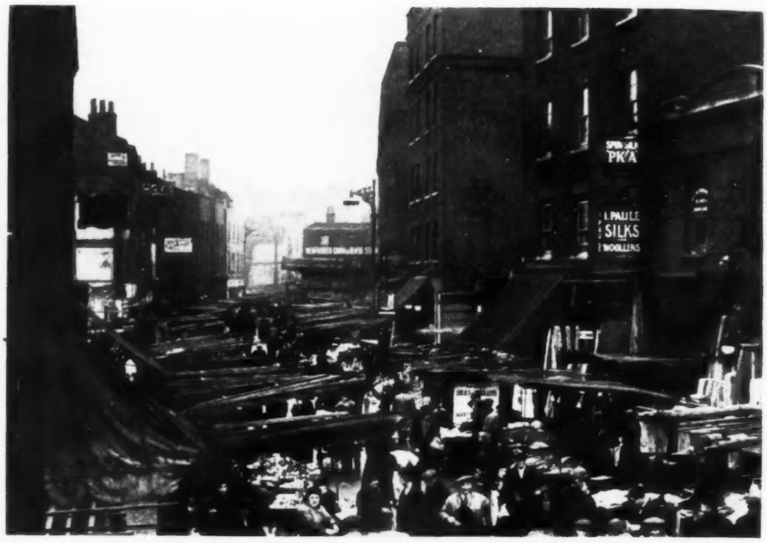
2: The number of applications (many of great urgency) received by the Housing Association:

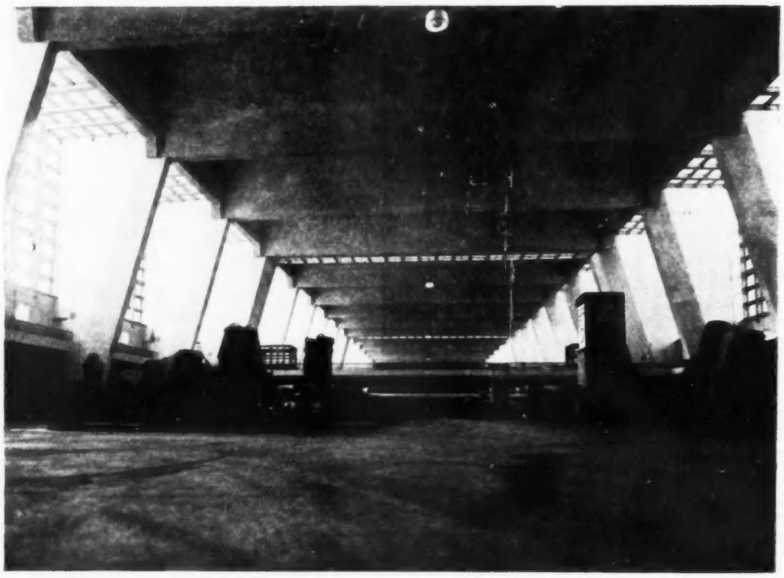
3: The Borough Council plan to rehouse some 3,000 people (a plan whose completion will still leave standing many areas of very bad property),

it seems that the true requirements of the borough amount to some 7,500 houses.

OVERCROWDING

PLANNED AND UNPLANNED MARKETS





Another contrast, not only between overcrowding and spaciousness, but between haphazard growth and planning for a purpose. The upper photograph shows the street market in Petticoat Lane, London, overlooked by dwelling-houses; the food in the market open to contamination, and the houses unprotected from the market refuse. The lower photograph shows the market hall at Frankfurt, designed to fulfil a particular purpose in a hygienic way.

HOLBORN

GENERAL POSITION

Area			406 acres
Population		1921	43,192
		1931	38,860
Decennial decrease			4,332
1931	Persons per acre		95·7
	Number of private families		9,355
	Population in private families		27,524
	Structurally separate dwellings occupied		6,177
	(vacant		121)
	Rooms occupied		25,622
	Persons per room		1·07
1921-31	Decrease in occupied dwellings		317 or 4·88%
	Decrease in number of private families		327 or 3·38%
	Families per occupied dwelling	1921	1·49
		1931	1·51
	Average size of private family	1921	3·12 persons
		1931	2·94 persons
	Average number of persons per room	1921	1·12
		1931	1·07
	Persons living more than 2 per room	1921	5,977 or 19·8%
		1931	4,718 or 17·1%
	(Families living more than 2 per room	1931	837 or 8·9%)

1931	Persons living over 3 per room	1,458
	3 and over 2	3,260
	Total over 2	4,718
	2 and over 1½	5,451
	Total over 1½	10,169
	1½ and over 1	5,341

Acute Overcrowding

31 families living 6 or more in 1 room
10 with 8 or more in 1.
2 with 10 in 1.

33 families living 8 or more in 2 rooms
5 with 10 or more in 2.
None with 12 or more in 2.

The proportion of persons living more than 3 per room rose from 5·0% in 1921 to 5·3% in 1931—the number so living fell very slightly.

The Wards

Number of wards in the borough	9
Number of wards containing over all average of over 100 persons per acre	5
Number of wards containing over all average of over 80 persons per acre	5
Number of wards containing over all average of over 1 person per room	6
Number of wards containing over all average of over 1½ persons per room	nil

Three Worst Wards on Persons Per Room Standard

	Central St. Giles	St. George the Martyr	South-East St. Andrew
Acreage	35	39	64
Population 1921 ..	5,432	7,220	8,740
1931	4,934	6,981	7,647
Persons per acre ..	141·0	179·0	119·5
Private families ..	1,207	1,792	2,457
Population in private families	3,726	5,337	7,292
Structurally separate dwellings occupied	554	591	2,253
Rooms occupied ..	2,930	4,093	6,151
Persons per room ..	1·27	1·30	1·19

The three other wards with over all averages of over 1 person per room are :—

Lincolns Inn	1·15
North St. Andrew	1·05
Saffron Hill	1·05

A BRIEF DESCRIPTION OF THE TWO WORST WARDS

St. George the Martyr is now the worst ward of the borough so far as overcrowding is concerned. *Central St. Giles*, which shows slightly better figures for 1931, was rather worse 10 years before.

Each of these wards is well known to every Londoner, though their names may not be familiar. St. George the Martyr has Southampton Row as its boundary on the west, Guilford Street on the north, Red Lion Street and Lambs Conduit Street on the east, and Eagle Street on the south.

Central St. Giles is bounded by Charing Cross Road on the west, New Oxford Street on the north, Castle Street on the south; Drury Lane and Broad Street form the great part of the eastern boundary.

Each of these wards is very mixed in character. St. George the Martyr contains good middle-class residential houses and flats, a large number of business and professional offices, shops and factories, and working-class property of varying grades.

Central St. Giles is somewhat similar, though there is less business and industry and more restaurants and theatres. There is also a large percentage of foreigners, who are rare in the St. George the Martyr Ward.

ST. GEORGE THE MARTYR WARD

The ward of St. George the Martyr is worth treating in some detail. The figures given below relate in part to 1930 and in part to 1931. Since then the position has become little better. The enquiry was conducted by the Medical Officer of Health of the borough and covered practically all poorer-class tenement houses in the ward.

General Description of the Ward

39 acres hold close upon 7,000 persons, despite the presence of middle-class

residential property and a large number of offices, institutions, factories and workshops, etc., as already mentioned.

There are 236 houses used for working-class dwellings, 150 of which are registered under the bye-laws as to houses let in lodgings. The enquiry covered 233 of these houses, and is therefore neither a sample of the worst conditions, nor a random sample, but a complete picture of the ordinary working-class property. It excludes the middle-class houses and flats and the good-class tenements.

(NOTE.—It is surprising that the average accommodation per person in the whole ward is only 0·12 room more than for these dwellings—0·77 compared with 0·65.)

The 233 houses were let in 1,066 tenements, of which
410 were one-room dwellings
395 were two-room dwellings.
75% of the holdings were therefore of one or two rooms.

Conspicuous streets are :—

Old Gloucester Street :—46 houses inspected, total number of tenements 285, 234 of which were of one or two rooms.
East Street :—32 houses inspected, total number of tenements 187, 149 of which were of one or two rooms.

Overcrowding

Of the whole number of 1,066 dwellings
100 of the one-room dwellings were inhabited by 3 persons or more. (9 by 6 or more.)
78 of the two-room dwellings were inhabited by 5 persons or more. (8 being inhabited by 8 persons each.
17 of the three-room dwellings were inhabited by 7 persons or more.

Structural Condition

290 classed as good, i.e. "structure sound, holding generally clean and in reasonable state of repair."
683 classed as fair, i.e. "generally old houses, structure somewhat worn, but still reasonably fit."
93 classed as poor, i.e. "structure old and worn, holding generally in unsatisfactory condition by reason of state of repair or tenant's failure to keep holding in clean and good condition."

Sanitary Accommodation

In 62 cases accommodation was inside the house.
In 117 it was in yard or area.
In 52 there was both inside and outside accommodation.

Cooking Facilities

"In only 14% of the tenements could the cooking facilities be regarded as completely satisfactory ; these all had close ranges. The use of gas cookers in small tenements often gives rise to nuisance, particularly as in nearly all cases these cooking stoves are not provided with suitable hood and flue for carrying off the fumes. The practice of placing the stoves on the landings is also objectionable, resulting in the fumes pervading the whole staircase and, in consequence, often most of the house."

GARBAGE IN THE STREET

Unprotected garbage where children play breeds disease. A photograph taken in the Borough of Holborn.

Food Storage Facilities

Of the 1,066 dwellings
246 had no food storage facilities (this excludes rooms merely used for sleeping).
442 had only unventilated cupboards.
7 had ventilated cupboards.

Personal and Domestic Washing Facilities

27 baths
91 with bowls at sinks
917 with bowl in room
31 —no information.

663 with washhouse available
372 without
31 —no information.

Among the *General Defects* found were :—

104 dirty rooms
18 dirty staircases
23 verminous rooms
10 damp houses
38 defective or uneven floors
30 defective roofs.

The Medical Officer of Health notes that :—

> ". . . The works required to remedy the defects have been carried out in a number of houses ; in others notices have been served where the defects could be regarded as 'nuisances' under the Public Health (London) Act, 1891. It must of course be remembered that nearly all the houses in the area that have been inspected are by no means new houses, and conditions similar to those indicated in the above table must be expected in such property, particularly when a house, not designed for the purpose, is used for housing a number of families."

OVERCROWDING

In 195 of the holdings, inhabitants were overcrowded on the Registrar General's Standard.
But very few cases of overcrowding on the basis of cubic space available can be found.
The explanation lies in the largeness of the rooms and the fact that almost every room is used for sleeping as well as living.

THE BOROUGH COUNCIL

The Borough Council has decided that at present there are no slums in its area, though there is one small area which the Council considers may require dealing with during the next five years. The various properties included in areas which the L.C.C. considers suitable for clearance or for improvement are, in the opinion of the Borough Council, not at present in a condition which would justify such action.

But there are houses in the borough which were condemned before the war,
and something must be done about these :—

18 adults and 11 children share one lavatory.

BIBLIOGRAPHY

Following is a list of a number of books and pamphlets on slums, many of which have been drawn on for this Survey.

Census of England and Wales, 1931 (County of London). H.M.S.O. 3s.

Annual Reports of Medical Officers of Health for—

Bermondsey	*Paddington*
Bethnal Green	*Poplar*
Finsbury	*Shoreditch*
Hackney	*Southwark*
Islington	*St. Pancras*
Kensington	*Stepney*

New Survey of London Life and Labour. P. S. King & Son.

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Metropolitan Borough of Holborn. St. George the Martyr Ward. Housing Survey, 1930.

Survey of Housing Conditions in the Royal Borough of Kensington. Kensington Housing Trust or Weardale Press. 3d.

Annual Reports of the Kensington Housing Association.

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Better Homes for Shoreditch People. Shoreditch Housing Association.

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The Cockroach: Its Life-History and How to deal with it. By Frederick Laing, M.A., B.Sc. The illustrations and extracts on page 527 have been taken from this book.

The Times.
South London Press.
East London Advertiser.
City and East London Observer.
Hackney Gazette.
Westminster Chronicle.
Kensington News.
Daily Telegraph. Articles by Howard Marshall.
Daily Worker.
Labour Bulletin.

[Acknowledgment is hereby made of the courtesy of the following in respect of various illustrations reproduced in this issue: The St. Pancras House Improvement Society, Ltd.; The "New Homes for Old" Exhibition; Kensington Housing Trust; and G. H. Dart, Medical Officer of Health for Hackney. —ED., *A.J.*]

At another house there are supposed to be 15 inhabitants, but the number often reaches 20-25, as there are lodgers coming and going on the first floor; one lavatory.

At yet another house there are 38 people using one lavatory without a seat, and there are only two taps in the house.

RENTS

Of the 233 houses inspected in the survey of Ward F., in

72 all the tenements were controlled.
105 some were controlled.
41 all were decontrolled.
(In 15 information was not obtained.)

Since that date the proportion of those decontrolled has of course increased.

In the controlled tenements the average rent was 4s. 6d. per room. In the decontrolled tenements the average rent was 7s. 9d. per room.

These figures may be taken as typical of the rents charged for similar accommodation in the borough as a whole.

CONCLUSION

The overcrowding represented by the above figures is primarily overcrowding of families per house. Of the houses inspected the average number of dwellings per house is 4·6.

The houses are mainly structurally sound, or could be rendered so. But if the working-class houses in such a ward as this were reconditioned and adequate bathrooms, etc., added, at least half the families would have to be rehoused elsewhere, and the rents which those who remained would have to pay would be prohibitive. Already 15s. for two rooms is the general rule for decontrolled dwellings. Also it is essential that a large proportion of the inhabitants of the ward should live in close proximity to their work.

So that although the houses cannot be said to be in themselves fit only for demolition, such demolition, and the adoption of a large-scale plan of rehousing on the site is the only practicable solution of the problems of the area, which is quite typical of conditions in central London.

The erection of a really big block of working-class flats would make it possible for this ward to take persons now living in the neighbouring wards, so that in these reconditioning, and the displacement of families which are, or would be made, surplus to the accommodation, would be a practical proposition.

In the whole borough

1,458 persons living over 3 per room (assume average 4) have 360 rooms. They should have very nearly 1,000, and therefore need more than 600 more.

3,260 persons living 3 and over 2 (assume average 2½) have 1,300 rooms. They should have nearly 2,200 and therefore need nearly 900 more.

5,451 persons living 2 and over 1½ (assume average 1¾) have 3,100 rooms. They should have over 3,600 and therefore need over 500 more.

If there were no unfit houses in the borough the needs would be some 2,000 rooms.

If all the overcrowded houses were also unfit, 6,800 would be required.

But owing to the imperative necessity of leaving the great majority of the workers in the borough, it is clear that even if the houses were all fit the mere provision of 2,000 rooms—miles away—would not in fact meet the real needs, but would, on the contrary, impose intolerable hardship on those displaced.

Following the usual rule of increasing the minimum and maximum by 25% and taking the geometric mean, Holborn needs some 4,500 rooms or, say, 1,500 separate dwellings. But owing to the imperative necessity of rehousing on the site in order that in the better parts of the borough reconditioning may be possible without the reconditioned houses being overcrowded, it is certain that more demolition is imperative.

For Holborn to solve its own problems in the manner suggested, by taking over the worst areas and rehousing a larger number on the site than at present inhabit it—

1: The expenditure of a large quantity of money on really tall blocks of flats is essential.
2: The demolition work to be undertaken will have to be in the neighbourhood of 1,500 dwellings, say 400-500 houses, while some 3,000 flats should be built on the sites thus left vacant.

The remaining half of the unsatisfactory dwellings now existing could then be reconditioned and families living in one floor could be given adequate space in accordance with the standard of not more than 1½ per room, a standard at present exceeded by one-quarter of the inhabitants.

Ten boroughs have now been considered in some detail. Statistics for the remaining boroughs, on the same lines as those given at the head of each of the preceding ten, are shown overleaf in the form of a table.

STATISTICS FOR THE

GENERAL POSITION

		CITY OF LONDON	BATTERSEA	BETHNAL GREEN	CAMBERWELL	CHELSEA	DEPTFORD
Area (acres)		677	2,163	760	4,480	660	1,564
Population	1921	13,709	167,739	117,238	267,198	63,697	112,534
	1931	10,999	159,552	108,194	251,294	59,031	106,891
Decennial increase (+) or decrease (–)		–2,710	–8,187	–9,044	–15,904	–4,666	–5,643
1931 Persons per acre		16·2	73·8	142·4	56·1	89·4	68·3
Number of private families		2,499	44,618	27,916	68,435	16,332	29,248
Population in private families		7,590	155,004	105,700	242,604	52,374	104,181
Structurally separate dwellings occupied		2,359	27,219	18,156	42,114	10,966	17,750
(vacant)		(25)	(216)	(87)	(404)	(543)	(121)
Rooms occupied		8,300	158,118	78,466	253,360	66,525	105,823
Persons per room		0·91	0·98	1·35	0·96	0·79	0·98
1921-31 Increase (+) or decrease (–) in occupied dwellings		–563	+28	–125	+695	+104	–125
Increase (+) or decrease (–) in number of private families		–675	+1,630	+320	+2,331	–223	+1,241
Families per occupied dwelling	1921	1·09	1·58	1·51	1·60	1·52	1·57
	1931	1·06	1·64	1·54	1·62	1·49	1·65
Average size of private family (persons)	1921	3·31	3·82	4·14	3·93	3·46	3·93
	1931	3·04	3·47	3·79	3·55	3·21	3·56
Average number of persons per room	1921	0·98	1·04	1·46	1·04	0·85	1·05
	1931	0·91	0·98	1·35	0·96	0·79	0·98
Persons living more than 2 per room	1921	689	20,390	31,692	33,321	7,859	14,122
	1931	424	18,476	24,969	25,331	5,365	11,426
(Families living more than 2 per room	1931)	(76)	(3,023)	(4,023)	(4,029)	(889)	(1,862)
1931 Persons living over 3 per room		80	4,571	7,322	6,044	1,186	3,253
3 and over 2		344	13,905	17,647	19,287	4,179	8,173
Total over 2		424	18,476	24,969	25,331	5,365	11,426
2 and over 1½		919	23,539	24,654	35,965	7,853	15,968
Total over 1½		1,343	42,015	49,623	61,296	13,218	27,394
1½ and over 1		1,719	33,461	25,050	52,767	8,649	23,292
Acute Overcrowding							
Number of families living 6 or more in 1 room		1	64	105	81	12	60
8 or more in 1		nil	4	20	16	2	6
10 or more in 1		nil	nil	2	2	nil	2
8 or more in 2 rooms		1	107	224	166	37	67
10 or more in 2		nil	22	38	25	9	11
12 or more in 2		nil	2	3	2	nil	1
The Wards							
Number of wards in borough		28	9	4	20	5	12
Number of wards containing over all average of over 100 persons per acre		nil	3	4	7	2	3
over 80 persons per acre		nil	5	4	12	2	4
over 1 person per room		4	5	4	10	1	6
over 1½ persons per room		nil	nil	nil	nil	nil	1

List of wards with over all average over 1 person per room

CITY OF LONDON

Portsoken	1·16
Walbrook	1·05
Bishopsgate Without	1·03
Bassishaw	1·01

BATTERSEA

Winstanley	1·28
Nine Elms	1·18
Church	1·13
Latchmere	1·05
Park	1·05

BETHNAL GREEN

South	1·42
West	1·41
North	1·33
East	1·27

CAMBERWELL

Addington	1·32
North Peckham	1·29
Cobourg	1·22
The West	1·21
Goldsmith	1·19
St. George's	1·16
Town Hall	1·08
Nunhead	1·05
Clifton	1·04
Marlborough	1·02

CHELSEA

Church	1·10

DEPTFORD

St. Paul's	1·57
Canterbury	1·21
Evelyn	1·13
Deptford Park	1·11
Vale	1·09
Clifton	1·07

REMAINING BOROUGHS

FINSBURY	FULHAM	GREENWICH	HAMMERSMITH	HAMPSTEAD	ISLINGTON	LAMBETH	LEWISHAM	ST. MARYLEBONE	STOKE NEWINGTON	WANDSWORTH	WESTMINSTER	WOOLWICH
587	1,706	3,858	2,287	2,265	3,092	4,083	7,015	1,473	864	9,107	2,503	8,282
75,995	157,938	100,450	130,295	86,153	330,737	302,868	174,194	104,173	52,172	328,307	141,578	140,389
69,888	150,928	100,924	135,523	88,947	321,795	296,147	219,953	97,627	51,208	353,110	129,579	146,881
−6,107	−7,010	+474	+5,228	+2,794	−8,942	−6,721	+45,759	−6,546	−964	+24,803	−11,999	+6,492
119·1	88·5	26·2	59·3	39·3	104·1	72·5	31·4	66·3	59·3	38·8	51·8	17·7
19,059	43,153	25,144	37,345	23,709	93,613	83,777	58,673	27,352	14,908	95,383	33,056	38,176
67,459	146,071	94,066	127,938	78,763	309,216	280,885	213,950	84,453	49,443	333,863	101,442	137,979
10,369	26,245	18,114	22,307	14,758	43,162	48,873	46,739	17,575	8,196	71,566	22,536	29,870
(98)	(297)	(166)	(263)	(527)	(358)	(538)	(590)	(1,104)	(150)	(1,000)	(859)	(331)
47,641	150,313	99,863	126,466	112,014	276,592	290,666	263,155	103,695	55,219	421,286	132,882	156,050
1·42	0·97	0·94	1·01	0·70	1·12	0·97	0·81	0·81	0·90	0·79	0·76	0·88
−520	+266	+1,588	+2,840	+436	−1,072	+189	+12,319	+438	−127	+9,026	−970	+3,822
−946	+2,717	+2,172	+4,082	+2,189	+4,189	+5,378	+14,988	+138	+978	+14,857	−890	+4,529
1·84	1·56	1·39	1·71	1·50	2·12	1·61	1·27	1·59	1·67	1·29	1·44	1·29
1·84	1·64	1·39	1·67	1·61	2·17	1·71	1·26	1·56	1·82	1·33	1·47	1·28
3·72	3·82	4·10	3·67	3·72	3·59	3·69	3·90	3·33	3·66	3·91	3·31	3·92
3·54	3·38	3·74	3·43	3·32	3·30	3·35	3·65	3·09	3·32	3·50	3·07	3·61
1·50	1·05	1·01	1·04	0·71	1·18	1·02	0·80	0·88	0·92	0·84	0·81	0·97
1·42	0·97	0·94	1·01	0·70	1·12	0·97	0·81	0·81	0·90	0·79	0·76	0·88
25,350	20,265	13,008	16,868	5,243	62,436	36,644	8,026	16,159	4,137	21,325	11,364	10,270
19,847	15,398	10,428	12,993	3,253	49,449	29,652	8,756	11,098	3,242	17,336	7,223	7,809
(3,313)	(2,454)	(1,597)	(2,192)	(577)	(8,587)	(5,008)	(1,225)	(1,950)	(544)	(2,670)	(1,230)	(1,247)
7,130	3,397	2,293	2,688	663	14,956	7,881	1,154	3,766	662	3,688	1,277	1,431
12,717	12,001	8,135	10,305	2,590	34,493	21,771	7,602	7,332	2,580	13,648	5,946	6,378
19,847	15,398	10,428	12,993	3,253	49,449	29,652	8,756	11,098	3,242	17,336	7,223	7,809
15,363	23,146	14,008	22,322	6,647	56,531	41,806	23,268	11,539	5,844	32,531	14,097	16,210
35,210	38,544	24,436	35,315	9,900	105,980	71,458	32,024	22,637	9,086	49.867	21,320	24,019
13,705	31,669	20,717	30,093	10,892	69,557	60,820	44,010	13,158	10,399	60,272	17,614	31,573
102	50	30	17	4	226	92	19	46	8	51	10	14
23	5	3	1	nil	23	6	3	8	1	7	nil	1
1	nil	nil	nil	nil	nil	nil	nil	nil	nil	1	nil	nil
250	79	38	65	17	418	198	23	109	11	79	34	25
43	10	2	13	2	68	33	2	28	3	15	4	5
4	3	nil	1	nil	5	5	nil	4	nil	1	nil	nil
11	8	8	7	7	11	12	15	9	6	9	14	14
7	4	nil	nil	nil	6	4	nil	5	2	nil	2	nil
8	4	nil	3	1	10	7	nil	5	3	nil	5	nil
10	5	4	4	1	9	5	2	1	1	nil	3	4
3	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil

FINSBURY	
Old Street	1·70
City Road East	1·62
Pentonville	1·60
St. James'	1·44
St John's	1·41
City Road West	1·36
West Finsbury	1·34
St. Mark's	1·19
St. Philip's	1·19
St. Sepulchre	1·08

FULHAM	
Walham	1·15
Margravine	1·10
Lillie	1·05
Sands End	1·05
Munster	1·01

GREENWICH	
St. Nicholas, Deptford	1·42
North West	1·26
North	1·08
Marsh	1·06

HAMMERSMITH	
No. 7	1·25
No. 1	1·04
No. 6	1·04
No. 4	1·01

HAMPSTEAD	
Kilburn	1·00

ISLINGTON	
Thornhill	1·44
St. Peter	1·33
Barnsbury	1·28
St. Mary	1·24
Lower Holloway	1·22
Canonbury	1·10
Tollington	1·05
Upper Holloway	1·04
Highbury	1·01

LAMBETH	
Bishop's	1·41
Marsh	1·26
Prince's	1·24
Vauxhall	1·12
Oval	1·07

LEWISHAM	
Downham	1·22
Bellingham	1·18

ST. MARYLEBONE	
Church Street	1·29

STOKE NEWINGTON	
Palatine	1·02

WANDSWORTH

None

WESTMINSTER	
Great Marlborough	1·16
St. John	1·08
St. Anne	1·00

WOOLWICH	
River	1·07
Dockyard	1·06
St. George's	1·04
St. Mary's	1·03

A SUMMARY

A SUMMARY of the results obtained from an analysis of the boroughs specially treated now follows; boroughs are given in alphabetical order; exact figures of numbers living at various densities, and of population, are still shown, to facilitate referring back. It should perhaps be mentioned again that the word "house" is not meant to exclude the idea of flats. These will in fact be necessary in most of the boroughs.

BERMONDSEY. Population 111,542.
7,082 people living over 3 per room.
46,012 people living over 1½ per room.
12,000 rooms required merely to abate overcrowding at over 1½ per room (allowance being made for impossibility of housing all families at exactly 1½ per room).
6,000 HOUSES required altogether.

HACKNEY. Population 215,333.
4,715 people living over 3 per room.
51,329 people living over 1½ per room.
11,250 rooms required merely to abate overcrowding at over 1½ per room.
8,000 HOUSES required altogether.

HOLBORN. Population 38,860.
1,458 people living over 3 per room.
10,169 people living over 1½ per room.
2,500 rooms required merely to abate overcrowding at over 1½ per room.
3,000 HOUSES required altogether.

KENSINGTON. Population 180,677.
5,443 people living over 3 per room.
42,159 people living over 1½ per room.
10,000 rooms required merely to abate overcrowding at over 1½ per room.
7,500 HOUSES required altogether.

PADDINGTON. Population 144,923.
5,185 people living over 3 per room.
34,189 people living over 1½ per room.
8,300 rooms required merely to abate overcrowding at over 1½ per room.
5,000 HOUSES required altogether.

POPLAR. Population 155,089.
7,992 people living over 3 per room.
62,799 people living over 1½ per room.
15,500 rooms required merely to abate overcrowding at over 1½ per room.
9,000 HOUSES required altogether.

ST. PANCRAS. Population 198,133.
9,010 people living over 3 per room.
65,636 people living over 1½ per room.
16,250 rooms required merely to abate overcrowding at over 1½ per room.
8,000 HOUSES required altogether.

SHOREDITCH. Population 97,042.
9,621 people living over 3 per room.
50,028 people living over 1½ per room.
13,700 rooms required merely to abate overcrowding at over 1½ per room.
6,500 HOUSES required altogether.

SOUTHWARK. Population 171,695.
10,230 people living over 3 per room.
71,559 people living over 1½ per room.
18,000 rooms required merely to abate overcrowding at over 1½ per room.
10,000 HOUSES required altogether.

STEPNEY. Population 225,238.
15,952 people living over 3 per room.
98,329 people living over 1½ per room.
25,000 rooms required merely to abate overcrowding at over 1½ per room.
14,000 HOUSES required altogether.

The necessary figures for the calculation of the housing needs of the remaining boroughs have been shown in the comprehensive table above.

Using the methods employed throughout the enquiry (see Introduction or conclusion to any borough considered in detail) the housing needs of these nineteen Metropolitan Boroughs (the City being included as a borough) have also been calculated.

Results are shown in the following summary :—

CITY OF LONDON. Population 10,999.
80 living at over 3 per room.
1,343 living at over 1½ per room.
250 rooms required merely to abate overcrowding at over 1½ per room.
550 rooms, say 150 houses, appear to be needed altogether. But since the greater part of the City is not suitable for residential purposes, real needs are at least 750 HOUSES.

BATTERSEA. Population 159,552.
4,571 people living at over 3 per room.
42,015 people living at over 1½ per room.
10,000 rooms required merely to abate overcrowding at over 1½ per room.
18,500 rooms, say 5,250 HOUSES, required altogether.

BETHNAL GREEN. Population 108,194.
7,322 people living at over 3 per room.
49,623 people living at over 1½ per room.
12,500 rooms required merely to abate overcrowding at over 1½ per room.
23,000 rooms, say 6,000 houses, appear to be needed altogether. This is certainly an under-estimate in view of the terrible nature of conditions prevailing in this borough. The estimate can safely be increased to 7,500 HOUSES.

CAMBERWELL. Population 251,294.
6,044 people living at over 3 per room.
61,296 people living at over 1½ per room.
14,000 rooms required merely to abate overcrowding at over 1½ per room.
26,500 rooms, say 7,500 HOUSES, required altogether.

CHELSEA. Population 59,031.
1,186 people living at over 3 per room.
13,218 people living at over 1½ per room.
3,000 rooms required merely to abate overcrowding at over 1½ per room.
5,750 rooms, say 1,500 HOUSES, required altogether.

DEPTFORD. Population 106,891.
3,253 people living at over 3 per room.
27,394 people living at over 1½ per room.
6,250 rooms required merely to abate overcrowding at over 1½ per room.
12,000 rooms, say 3,500 houses, appear to be required. Some parts of this borough are not suitable for residential purposes. On this account the estimate may safely be increased to 4,000 HOUSES.

OF LONDON

FINSBURY. Population 69,888.

7,130 people living at over 3 per room.
35,210 people living at over 1½ per room.
9,750 rooms required merely to abate overcrowding at over 1½ per room.
17,000 rooms, say 5,000 houses, appear to be required. Since Finsbury contains 75 unhealthy areas, and is in part unsuitable for residential purposes, this estimate may safely be increased. It seems likely that true requirements are about 6,500 HOUSES.

FULHAM. Population 150,928.

3,397 people living at over 3 per room.
38,544 people living at over 1½ per room.
8,500 rooms required merely to abate overcrowding at over 1½ per room.
16,500 rooms, say 5,000 HOUSES, required altogether.

GREENWICH. Population 100,924.

2,293 people living at over 3 per room.
24,436 people living at over 1½ per room.
5,500 rooms required merely to abate overcrowding at over 1½ per room.
10,500 rooms, say 3,000 HOUSES, required altogether.

HAMMERSMITH. Population 135,523.

2,688 people living at over 3 per room.
35,315 people living at over 1½ per room.
7,500 rooms required merely to abate overcrowding at over 1½ per room.
14,500 rooms, say 4,000 HOUSES, required altogether.

HAMPSTEAD. Population 88,947.

663 people living at over 3 per room.
9,900 people living at over 1½ per room.
2,000 rooms required merely to abate overcrowding at over 1½ per room.
4,000 rooms, or rather more than 1,000 houses, appear to be required. 1,000 HOUSES will be taken as sufficient.

ISLINGTON. Population 321,795.

14,956 people living at over 3 per room.
105,980 people living at over 1½ per room.
26,000 rooms required merely to abate overcrowding at over 1½ per room.
48,000 rooms, say 14,000 HOUSES, required altogether.

LAMBETH. Population 296,147.

7,881 people living at over 3 per room.
71,458 people living at over 1½ per room.
16,500 rooms required merely to abate overcrowding at over 1½ per room.
31,000 rooms, say 9,000 houses, appear to be required. This can be increased by 1,000, in view of the necessity of removing people from the unsuitable industrialised areas, to 10,000 HOUSES.

LEWISHAM. Population 219,953.

1,154 people living at over 3 per room.
32,024 people living at over 1½ per room.
6,000 rooms required merely to abate overcrowding at over 1½ per room.
12,750 rooms, say 3,500 houses, appear to be required. This is probably too high—there are not many unfit houses in Lewisham, though there is considerable overcrowding in some parts. 2,500 HOUSES will be enough for this borough.

ST. MARYLEBONE. Population 97,627.

3,766 people living at over 3 per room.
22,637 people living at over 1½ per room.
5,750 rooms required merely to abate overcrowding at over 1½ per room.
10,500 rooms, say 3,000 HOUSES, required altogether.

STOKE NEWINGTON. Population 51,208.

662 people living at over 3 per room.
9,086 people living at over 1½ per room.
2,000 rooms required merely to abate overcrowding at over 1½ per room.
3,750 rooms, say 1,000 HOUSES, required altogether.

WANDSWORTH. Population 353,110.

3,688 people living at over 3 per room.
49,867 people living at over 1½ per room.
10,000 rooms required merely to abate overcrowding at over 1½ per room.
20,750 rooms, say 6,000 HOUSES, required altogether.

WESTMINSTER. Population 129,579.

1,277 people living at over 3 per room.
21,320 people living at over 1½ per room.
4,250 rooms required merely to abate overcrowding at over 1½ per room.
8,750 rooms, say 2,500 houses, appear to be needed. In view of the fact that about half of the basements in this borough (there are some 5,000 basements altogether) are unfit for habitation, 3,500 HOUSES at least are required.

WOOLWICH. Population 146,881.

1,431 people living at over 3 per room.
24,019 people living at over 1½ per room.
4,750 rooms required merely to abate overcrowding at over 1½ per room.
9,750 rooms, say 2,750 HOUSES, required altogether.

In the whole of London, population 4,397,003,

150,130 people live at over 3 per room.
1,206,894 people live at over 1½ per room.
287,000 rooms are required merely to abate overcrowding at over 1½ per room.
165,750 HOUSES are required altogether.

This figure is the lowest which could possibly be deduced from a full survey of the facts. The methods used have tended at each stage to underestimate the number of houses required.

Emphasis has been placed in parts of the survey on the need to demolish all dwellings, or prohibit their use for residential purposes, in certain industrial areas, particularly in the neighbourhood of docks. It has also been pointed out that in order to effect a satisfactory rehousing of all people in such unsuitable areas, in unfit houses and in overcrowded conditions, it will be necessary in many cases to "plan big"—to demolish a large area which is suitable for the erection of blocks of flats, though some of the houses might not in themselves be condemned as unfit.

In London, at all events, a housing policy which fails to recognize this will not be able to grapple with the terrific difficulties involved in providing people with housing accommodation fairly close to their former dwellings.

Some allowance has been made for this factor in the case of several boroughs, but it is probable that the additions made to the totals of houses needed on this account are on the conservative side.

The requirements of London, then, at a bare minimum are 165,000 HOUSES.

SUMMARY AND CONCLUSIONS

The results of the whole enquiry are summarized in a concise form below.

I. The six largest provincial cities first dealt with.

LIVERPOOL. Population, 855,688.

20,515 people live at over 3 per room.
215,965 people live at over 1½ per room.
50,000 rooms required merely to abate overcrowding at over 1½ per room.
50,000 HOUSES required altogether.

LEEDS. Population, 482,809.

7,498 people live at over 3 per room.
97,507 people live at over 1½ per room.
22,000 rooms required merely to abate overcrowding at over 1½ per room.
70,000 HOUSES required altogether.

MANCHESTER. Population, 766,378.

8,864 people live at over 3 per room.
138,162 people live at over 1½ per room.
30,000 rooms required merely to abate overcrowding at over 1½ per room.
30,000 HOUSES required altogether.

BIRMINGHAM. Population, 1,002,603.

11,455 people live at over 3 per room.
180,746 people live at over 1½ per room.
37,500 rooms required merely to abate overcrowding at over 1½ per room.
50,000 HOUSES required altogether.

SHEFFIELD. Population, 511,757.

7,679 people live at over 3 per room.
106,314 people live at over 1½ per room.
22,500 rooms required merely to abate overcrowding at over 1½ per room.
27,000 HOUSES required altogether.

GLASGOW. Population, 1,088,461.

199,614 people live at over 3 per room.
445,819 people live at over *2* per room.
90,000 rooms required merely to abate overcrowding at over *2* per room.
55,000 HOUSES required to abate overcrowding at over *2* per room and replace all unfit houses.

The following figures represent the result arrived at from a consideration of the first six cities :—

Population, 4,707,696.
255,625 living over 3 per room.
1,184,513 living over 1½ per room (over 2 for Glasgow).
282,000 HOUSES required altogether.

II. The eight provincial cities which followed.

STOKE. Population, 276,639.

5,323 people live at over 3 per room.
80,807 people live at over 1½ per room.
18,000 rooms required merely to abate overcrowding at over 1½ per room.
12,500 HOUSES required altogether.

BRISTOL. Population 397,012.

3,681 people live at over 3 per room.
58,955 people live at over 1½ per room.
12,000 rooms required merely to abate overcrowding at over 1½ per room.
6,000 HOUSES required altogether.

HULL. Population, 313,544.

4,992 people live at over 3 per room.
65,151 people live at over 1½ per room.
13,750 rooms required merely to abate overcrowding at over 1½ per room.
6,000 HOUSES required altogether.

CARDIFF. Population, 223,589.

1,737 people live at over 3 per room.
36,785 people live at over 1½ per room.
8,500 rooms required merely to abate overcrowding at over 1½ per room.
5,000 HOUSES required altogether.

NEWCASTLE. Population, 283,156.

25,876 people live at over 3 per room.
110,423 people live at over 1½ per room.
32,000 rooms required merely to abate overcrowding at over 1½ per room.
13,000 HOUSES required altogether.

BRADFORD. Population, 298,041.

3,526 people live at over 3 per room.
57,015 people live at over 1½ per room.
12,000 rooms required merely to abate overcrowding at over 1½ per room.
15,000 HOUSES required altogether.

OF THE WHOLE ENQUIRY

EDINBURGH. Population 439,010.

43,893 people live at over 3 per room.

116,734 people live at over *2* per room.

22,500 rooms required merely to abate overcrowding at over *2* per room.

13,000 HOUSES required to abate overcrowding at over *2* per room and replace all unfit houses.

DUNDEE. Population 175,565.

22,438 people live at over 3 per room.

60,288 people live at over *2* per room.

12,000 rooms required merely to abate overcrowding at over *2* per room.

12,000 HOUSES required to abate overcrowding at over *2* per room and replace all unfit houses.

At the conclusion of this stage of the enquiry fourteen cities, with a total population of 7,114,272 had been considered.

367,091 people in these cities were living at over 3 per room.

1,770,671 were living at over 1½ (over 2 in the case of the three Scottish cities).

To abate overcrowding at over 1½ per room (over 2 in the case of the three Scottish cities) required 382,750 rooms.

364,500 HOUSES were required altogether.

To abate overcrowding at over 1½ per room, in the Scottish cities, as in the English, in addition to replacing all insanitary houses in all the fourteen cities, would bring total housing needs, at this stage, to 412,500.

III. The enquiry into the housing conditions of *LONDON* shows that within the area of the Administrative County, which has a population of 4,397,003

150,130 people live over 3 per room.

1,206,894 people live over 1½ per room.

To abate overcrowding at over 1½ per room requires 287,000 rooms.

OVER 165,000 HOUSES ARE NEEDED IN **LONDON**, as follows :—

	Houses		Houses
Battersea ..	.. 5,250	Kensington	.. 7,500
Bermondsey	.. 6,000	Lambeth ..	.. 10,000
Bethnal Green	7,500	Lewisham	.. 2,500
Camberwell	.. 7,500	Paddington	.. 5,000
Chelsea ..	.. 1,500	Poplar ..	.. 9,000
Deptford	.. 4,000	St. Marylebone	.. 3,000
Finsbury ..	.. 6,500	St. Pancras	.. 8,000
Fulham ..	.. 5,000	Shoreditch	.. 6,500
Greenwich	.. 3,000	Southwark	.. 10,000
Hackney	.. 8,000	Stepney ..	.. 14,000
Hammersmith	.. 4,000	Stoke Newington	1,000
Hampstead	.. 1,000	Wandsworth	.. 6,000
Holborn	.. 3,000	Westminster	.. 3,500
Islington	.. 14,000	Woolwich	.. 2,750

and the City of London needs 750 houses.

THE RESULTS OF THE WHOLE ENQUIRY,

which covered 15 cities with a total population of 11,511,275

show that

517,221 live at over 3 per room.

2,977,565 live at over 1½ per room (over 2 in the Scottish cities).

669,750 rooms are required merely to abate overcrowding at over 1½ per room (over 2 in the Scottish cities).

530,000 houses are required in order to abate overcrowding at over 1½ per room in the English cities and 2 per room in the Scottish cities and to replace all unfit houses.

578,000 houses are required to abate overcrowding at *over 1½ per room* and replace all insanitary houses in *all* the cities dealt with in the enquiry.

An estimate may now be attempted of the housing needs of Britain. The enquiry has covered just over one-quarter of the population of Great Britain.

Assuming that housing conditions in the other parts of the country (ranging from cities of about 250,000 to the smallest rural areas) are half as bad as in the cities investigated, which seems justifiable so far as can be judged, the total

HOUSING NEEDS OF BRITAIN
amount to
1,400,000 houses.

SLUM *AND THE* LAND

[*By E. Maxwell Fry*]

IN the article on this subject, in the JOURNAL for June 22, it may be remembered that the three dominant issues were set down under the headings of Rent, Cost and Land, of which rent was to be regarded as fixed, the costs of construction were to be brought down to a minimum through the operation of a system of standardization and scientific management—leaving land as the unsolved term of the equation.

That land is the bugbear of slum clearance is a truism. But there are plenty of obvious facts which are by no means seen as hinging upon other obvious facts, and this is one. Nobody who has any hand in London housing is unaware of the difficulty of finding the right sort of land; even of finding sufficient land to carry out clearance work; but they are all forced to get on with their job, even if it means making a bad job. And yet this process involves waste in its every action.

NINETEENTH CENTURY PLANNING AND UNPLANNING

London is to be the scene of a vast amount of rebuilding during the next twenty years. It spreads today over more square miles than we care to think of. Parts of it are superlatively well planned—relatively small parts. Vast areas are the result of an unplanned accretion that took place during the worst period of the last century; and, unfortunately for us, it is in these unplanned areas that slum clearance is forced to operate. They are of such disorder, so mean and so dirty, and they have become so much a part of the Londoner's dreary life, that even those who live in more fortunate parts accept their conditions as inevitable, and so nothing is done. And so every year the work of senseless "surgery" goes on; new blocks of high tenements being inserted here and there in the heart of this century-old muddle, increasing congestion and doing nothing to ease the stagnation which worsens with time. Let us look at a part of it in detail.

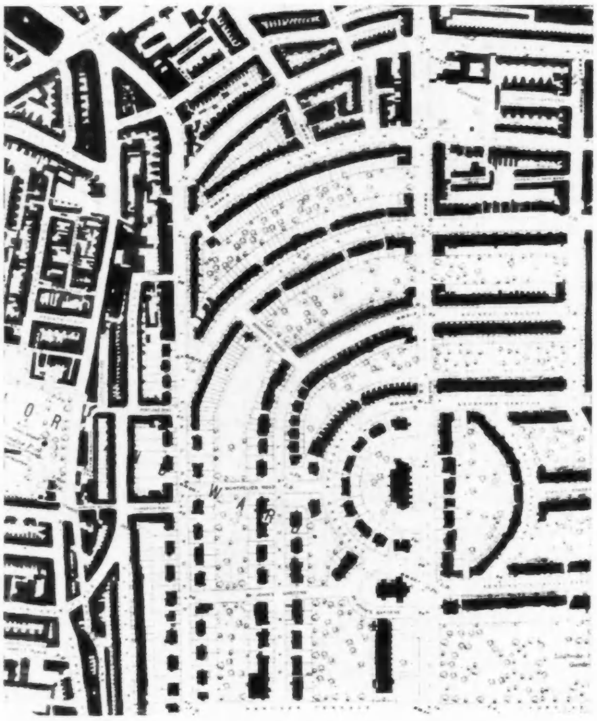
CLOSE-UP

Reproduced here is a part of one of the later developments of classic London. The Ladbroke Estate, immediately north of Notting Hill, where it covers the top and slopes of high ground falling away west and north, was the last westward extension of the west end of London. It is "Forsythe's Country." If you look closely at the plan, you will see how it centres on Ladbroke Square, probably the finest residential square in London. Then mark how the wide roads encircle the higher land, its spacious gardens cutting a swathe of green, half encircling the estate. It looks beautiful now. The trees are fully grown, façades are still intact. It is development of a very high order, and despite a growing poverty in all classes, this district maintains its values. It is still a good place to live in. To walk across it on a summer evening is to feel proud of our forefathers' intelligence.

But drop down from the high places In two minutes' walking one has left all this behind. It is as though one had stepped through a garden gate into a noisome street, for at the turn of the road all order ceases. There comes a tangled confusion of narrow streets, tall façades that shut out light, and a numberless population that swarms over pavements and roadways. An able-bodied retired colonel from his garden on the Estate could pitch a stone into the centre of this slum. Yet it is in this confusion that slum clearance operates. For mile upon mile westward and northward are no further evidences of planning. In some cases roads have followed old lanes and tracks which lie ossified within the general mass. Individualism has filled in empty spaces for profit. There has been no control over more than a man could deal with for his own advantage; and it is now all old, used, stiff with property rights and vested interests, and rich with over-crowding values.

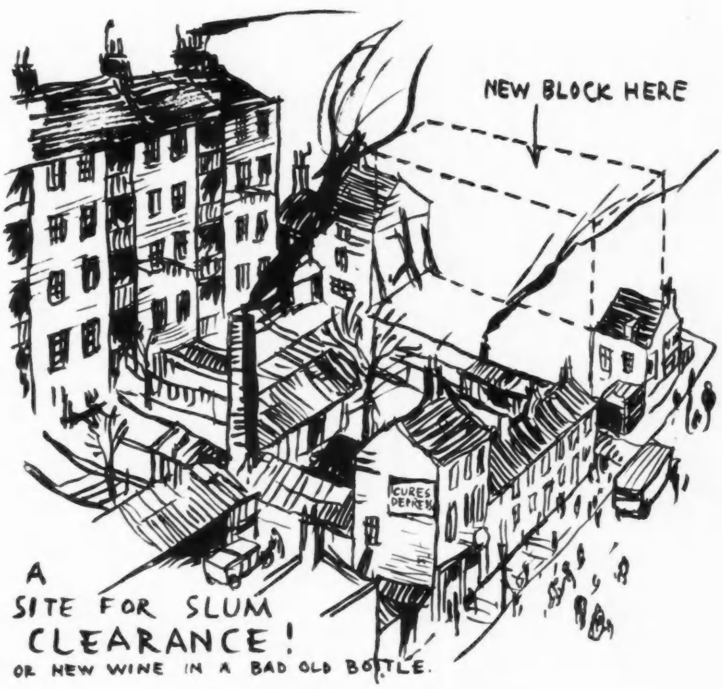
A SITE FOR SLUM CLEARANCE

Let us imagine that a voluntary Housing Association, formed with the object of promoting better living conditions, has money in hand to spend on building. It looks for a site, and finds that it can buy ten cottages and their



The Ladbroke Estate, Kensington. (Reproduced from the Ordnance Survey Map, with the sanction of the Controller of H.M. Stationery Office.) Ladbroke Square, referred to above, is in the bottom right-hand corner.

small gardens at a sum approximating to £8,000 an acre. Along one side of the site there runs an old tenement block, built with pious hope and good intention, seven storeys from the ground. Along another side run all that is left of a row of workmen's dwellings—part of them having been pulled down to build a small foundry, which extends over the garden land at the rear; part having been converted to the uses of a public-house, which, thriving, was rebuilt upwards. Garden areas were further built over at one time or another with stables, which now hold the unprospering business of a motor repair shop, run by two ex-Service men. A few gardens remain, bravely trying their best in an atmosphere of general and particular pollution. It is possible with limited funds to buy just that much land as will hold a block of "model" flat dwellings, and in due course this block rises, housing three times the population the land formerly carried, adding a further degree of congestion—and, worse than this, perpetuating a wasteful street plan; making it trebly difficult ever to deal with this land so that its inhabitants may lead a new and better life.



A drawing by E. Maxwell Fry.

ON A LARGE SCALE

This is a close-up of but a tiny part of London which goes on repeating itself endlessly in every direction. Fairly large areas of the East End and parts of the South are laid out in uniform streets of small two-storey cottages; many of the streets of East and South London are wide and direct; but in the main there is no coherence, and the great machine toils on exhausting its millions of pounds and its thousands of lives. Lord Ashfield said recently that we should never deal with the traffic problem in London adequately until we rebuilt our streets. He sees the traffic problem in terms of land.

Slum clearance can also be solved only in terms of land, *of the control of land.* It is as though we have to say to ourselves "are we, or are we not, going to deal with London?" You might think it an obvious enough question, but remember how many are the advocates in favour of leaving London to settle itself, and building new towns on the outskirts for people who have no work there, and must travel to and from the centre to their beds. *London cannot be left.* It gets older and more difficult to deal with every day, and we shall have to bring ourselves to think of it in terms of something that we can, and must, control—however difficult this may appear. The original control of land in London lay with the great landowners, who, on the whole, made a good job of it. But that control has finished, and gradually but inevitably a general control over the land must be assumed for the good of the community. So far we proceed by restriction, controlling abuses. But this is a purely negative control which does not touch the profits accruing from the use of land. Indeed, it tends to accentuate the flow of profits towards individual owners and forces us to recognize that the costs of housing the poorer and much the more numerous sections of the population, are extravagantly and anti-socially high.

If the Government are serious in their recent manifesto on slum clearance, if they hope for one minute to rid England of slums in five years, then land for slum clearance must be controlled over wide areas if the expense of carrying out the programme of slum clearance is not to be altogether too great. Slum clearance, so far as the L.C.C. is concerned, is carried out by a Housing Committee, which makes a survey of conditions and land values, forming the basis of a programme extending over a number of years. With this programme the L.C.C. town planning committee has little or nothing to do, for town planning within the London area is a scattered business, with no general plan, no survey, and only very vague intentions. And yet the L.C.C. intend to spend thirty-five million of money in ten years.

Within the London area there are working for slum clearance, not only the L.C.C., but a score of separate boroughs, each with a programme of work, and many housing associations doing their individual shares. None of these have any general plan to work to; few of them know what their neighbours are doing. It is extraordinary that we should be spending these great masses of money in a really fine endeavour to clear up the mess left by our immediate ancestors, and yet going forward with as little plan as they had themselves—just as though the art of planning and the science of thinking ahead had died with them.

It is not that we are too poor to plan, for Italy is not a rich country, and yet Mussolini can afford to plan; nor yet is Austria rich, but can attract housing reformers from all over the world to view the work done in Vienna—done and paid for.

The difficulties are undoubtedly immense, and yet are we to believe that slums really do present the most urgent problem we have had to face since the war? If so, then the means of solving congestion must be urgent enough to overcome the difficulties of our housing, and the scale must be one large enough to create an entirely new set of conditions.

There can be no effective lasting slum clearance without town planning.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	BANBURY	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S. Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A_1	Bristol	S.W. Counties	1 5	1 0¾
B	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A	Buxton	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S. Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A	Cumberland	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
B	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	HALIFAX	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	JARROW	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	LANCASTER	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W. Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH	N.W. Counties	1 4½	1 0½
A_2	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM	Mid. Counties	1 4	1 0
A	Oldham	N.W. Countie	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	PAISLEY	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
	Swindon	S.W. Counties	1 4	1 0
A_1	TAMWORTH	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1¼
A	Tyne District	N. E. Coast	1 5½	1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	YARMOUTH	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2¼
General Labourer	,,		1	2¼
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
Thames Ballast	per Y.C.		6	9
¾" Crushed Ballast	,,		7	6
Building Sand	,,		7	9
Washed Sand	,,		8	9
2" Broken Brick	,,		8	3
¾" ,, ,,	,,		11	6
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4"		6"	
		s.	d.	s.	d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6		—
Gaskin	,,		5		—

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	9	2	6
,, Wirecuts	,,	8	2	6
,, Brindles	,,	7	6	6
,, Bullnose	,,	9	14	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	8	8	0
Luton Facings	,,	8	0	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		2	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		19	0
,, ⅞"	,,	1	1	6
,, 1"	,,	1	3	6
,, 1¼"	,,	1	7	6
,, 1½"	,,	1	12	0
Deal matchings ⅝"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1½"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/-	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1½"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

TUBES.	Per cent.		Per cent.
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	,,	8	6
,, ,, ⅜"	,,	8	3
,, ,, ½"	,,	8	0
,, ,, ⅝"	,,	7	6
,, ,, ¾"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3"		4"	
		s.	d.	s.	d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	,,	5	0	8	6
Boots	,,	3	3	4	5
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	1	0
,, drawn pipes	,,		18	0
,, soil pipe	,,	1	5	0
,, scrap	,,		13	6
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			10½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3"		4"		6"	
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2⅞
,, ,, 26 oz. ,, ,, ,,	,,					3½
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
¼" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

			£	s.	d.
Digging over surface n/e 12″ deep and cart away		Y.S.		2	9
,, to reduce levels n/e 5′ 0″ deep and cart away		Y.C.		8	6
,, to form basement n/e 5′ 0″ deep and cart away		,,		9	0
,, ,, 10′ 0″ deep and cart away		,,		9	6
,, ,, 15′ 0″ deep and cart away		,,		10	0
If in stiff clay	add	,,		2	6
If in underpinning	,,	,,		4	0
Digging, return, fill and ram	,,	,,		4	0
Planking and strutting to sides of excavation		F.S.		1	0
,, ,, to pier holes		,,			5
,, ,, to trenches		,,			5
,, ,, extra, only if left in		,,			3
Hardcore, filled in and rammed		Y.C.		10	0
Portland cement concrete in foundations (6-1)		,,	1	6	0
,, ,, (4-2-1)		,,	1	12	6
,, ,, underpinning		,,	1	16	0
Finishing surface of concrete, spade face		Y.S.			7

DRAINLAYER

		4″ s.	4″ d.	6″ s.	6″ d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
,, junctions		3	9	4	6
Gullies and grating	,,	16	6	18	0
Cast iron drains and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
,, ,, in cement	,,	29	15	0
,, Stocks in cement	,,	35	15	0
,, Blues in cement	,,	52	0	0
Extra only for circular on plan	,,	2	0	0
,, backing to masonry	,,	1	10	0
,, raising on old walls	,,	2	0	0
,, underpinning	,,	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	,,			5½
,, ,, ,, red brick facings and pointing	,,			11
,, ,, ,, blue brick facings and pointing	,,		1	4
,, ,, ,, glazed brick facings and pointing	,,		3	6
Tuck pointing	,,			7
Weather pointing in cement	,,			3½
Slate dampcourse	,,			10
Vertical dampcourse	,,		1	1

ASPHALTER

		s.	d.
½″ Horizontal dampcourse	Y.S.	4	6
¾″ Vertical dampcourse	,,	6	9
¾″ paving or flat	,,	4	0
1″ paving or flat	,,	5	6
1″ × 6″ skirting	F.R.	1	0
Angle fillet	,,		2
Rounded angle	,,		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	,,		13	6
Artificial stone and do.	,,		13	0
York stone templates, fixed complete	,,		10	6
,, thresholds	,,		13	6
,, sills	,,	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	3	10	0
Do., 18″ × 9″	,,	3	7	0
Do., 24″ × 12″	,,	3	17	0
Westmorland slating, laid with diminished courses	,,	6	0	0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	3	0	0
Do., all as last, but of machine-made tiles.	,,	2	16	0
20″ × 10″ medium Old Delabole slating, laid to a 3″ lap (grey)	,,	4	6	6
,, ,, ,, ,, ,, ,, (green)	,,	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
,, to stanchions	,,			8
,, to staircases	,,		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	,,		4	6
,, ,, roofs	,,		6	6
,, ,, trusses	,,		7	6
,, ,, partitions	,,		8	6
¾″ deal sawn boarding and fixing to joists	Sqr.	1	14	6
1″ ,, ,, ,, ,,	,,	1	17	6
1¼″ ,, ,, ,, ,,	,,	2	3	0
¾″ × 2″ fir battening for Countess slating	,,		9	6
Do. for 4″ gauge tiling	,,		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
,, ,, ,, 2 ,,	,,		2	9
,, ,, ,, 3 ,,	,,		3	3
Stout herringbone strutting to 9″ joists	F.R.			10½
1″ deal gutter boards and bearers	F.S.		1	2
1¼″ ,, ,, ,, ,, ,,	,,		1	6
2″ deal wrought rounded roll	F.R.			8
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼″ do.	,,	2	12	6
1½″ do.	,,	2	19	0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1¼″ do.	,,		1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½″ deal moulded sashes of average size	F.S.	1	11
2″ ,, ,,	,,	2	1
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1½″ heads, 1″ inside and outside linings, ⅜″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	3	9
2″ ,, ,, ,,	,,	4	0
Extra only for moulded horns	Each		6
1½″ deal four-panel square, both sides, door	F.S.	2	0
2″ ,, ,, ,,	,,	2	8
1½″ ,, but moulded both sides	,,	2	4
2″ ,, ,, ,,	,,	3	0
4″ × 3″ deal, rebated and moulded frames	F.R.	1	2
4½″ × 3½″ ,, ,,	,,	1	8
1¼″ deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	2	6
1½″ deal moulded wall strings	,,	2	1
1½″ ,, outer strings	,,	2	4
Ends of treads and risers housed to string	Each	1	9
3″ × 2″ deal moulded handrail	F.R.	1	3
1″ × 1″ deal balusters and housing each end	Each	2	0
1½″ × 1½″ ,, ,,	,,	2	9
3″ × 3″ deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	,,	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	,,		19	6
Do. stanchions with riveted caps and bases and do.	,,		19	0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	,,		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	6
Do. in flashings		1	18	0
Do. in covering to turrets, etc.	,,	2	4	0
Do. in soakers	,,	1	10	0
Labour to welted edge	F.R.			3½
Open copper nailing	,,			3½
Close ,, ,,	,,			4½

		½″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	,,	6½	8	9	11	1	—
Boiler screws and unions	,,	3 3	3 9	5 0	8 0	—	—
Lead traps	,,	—	—	—	6 3	8 9	—
Screw down bib valves	,,	6 9	9 6	11 0	—	—	—
Do. stop cocks	,,	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	,,	1	6
Do. outlets	,,	2	9
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	,,	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	,,		3	6
Lathing with sawn laths to ceilings	,,		1	4
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,,		1	9
Do. vertical	,,		2	3
Rough render on walls	,,		1	4
Render, float and set in lime and hair	,,		2	0
Render and set in Sirapite	,,		2	2
Render, backing in cement and sand, and set in Keene's cement	,,		3	1
Extra, only if on lathing	,,			4
Keene's cement, angle and arris	F.R.			6
Arris	,,			2
Rounded angle, small	,,			3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,			1½
1″ granolithic pavings	Y.S.		3	6
1½″ ,,	,,		4	6
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,		17	6
9″ × 3″ ,, ,, ,, ,,	,,	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

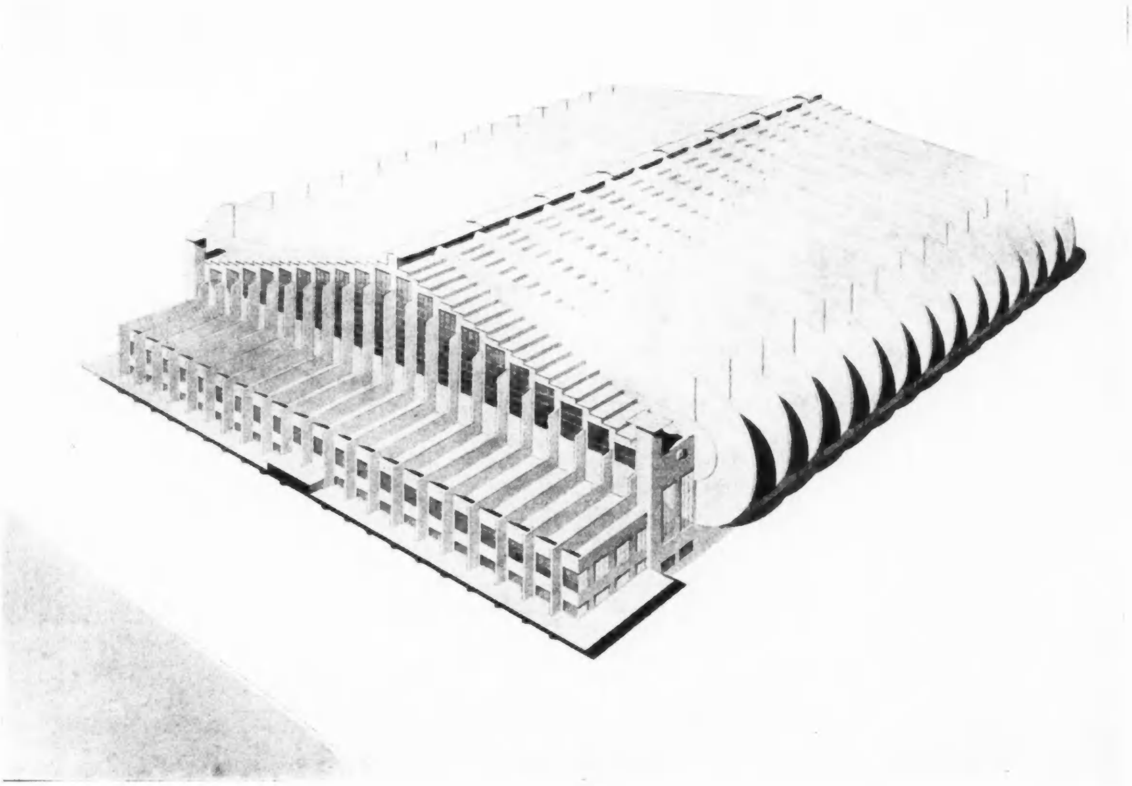
		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	,,		8¾
Arctic glass and glazing with putty	,,	1	1
Cathedral glass and do.	,,	1	2
Glazing only, British polished plate	,,		7
Extra, only if in beads	,,		2
Washleather	F.R.		4

PAINTER

			s.	d.
Clearcolle and whiten ceilings		Y.S.		6½
Do. and distemper walls		,,		9
Do. with washable distemper		,,	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces		,,	3	3
Do. on woodwork		,,	3	6
Do. on steelwork		,,	3	0
Do. and brush grain and twice varnish		,,	5	6
Stain and twice varnish woodwork		,,	1	11
Stain and wax-polish woodwork		,,	4	6
French polishing		F.S.	1	2
Stripping off old paper		Piece	2	0
Hanging ordinary paper	from	,,	2	9

SWIMMING POOL FOR WEMBLEY STADIUM

PROPOSED DESIGN : BY SIR E. OWEN WILLIAMS

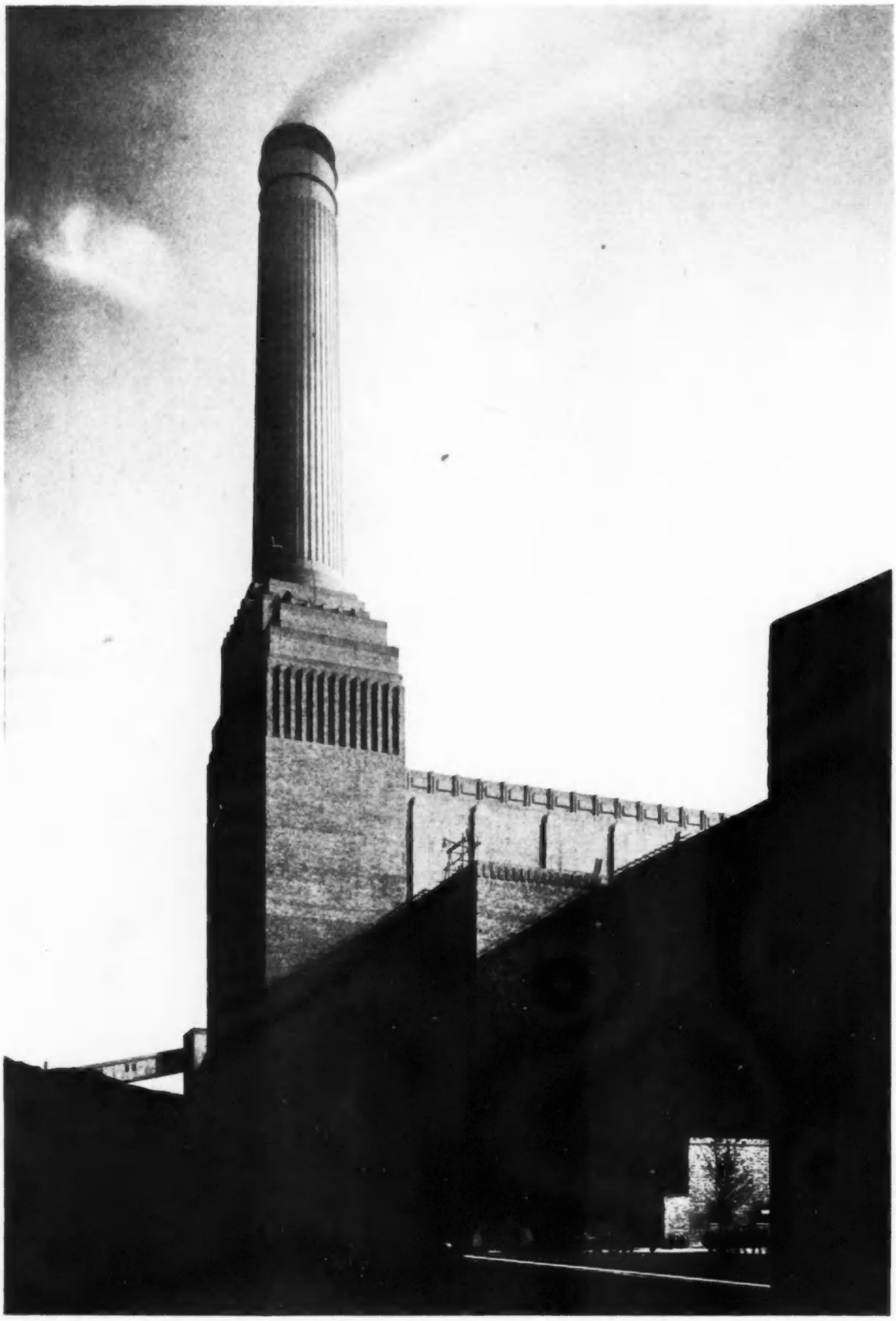


ABOVE is a bird's-eye view of the proposed Empire swimming pool and sports arena, to be erected in the grounds of the old British Empire Exhibition, which adjoin the Wembley Stadium.

It is to be constructed almost entirely of reinforced concrete and glass, and will cover an area of two acres. The arena will be 300 feet long by 80 feet wide; and the swimming pool will be 200 feet long and 60 feet wide. The maximum depth of the water is to be 16 feet.

The building, estimated to cost £150,000, will, it is stated, also be used as an arena for boxing, circuses, industrial and trade exhibitions, public meetings, etc.

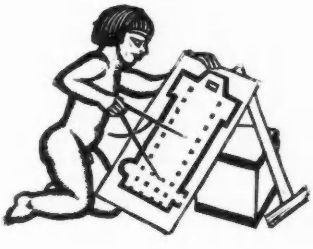
Sir E. Owen Williams, K.B.E., is responsible for the design.



A NEW LONDON LANDMARK

The first half of the new Power Station at Battersea, with its two monumental chimneys, is now complete, and London has another landmark. Two more chimneys, like the one shown in the illustration, are to be erected later, each rising to a height of 337 feet above ground level. Further illustrations of the Station appear on pages 563-569.

Sir Giles Gilbert Scott R.A., is the architect for the exterior; Halliday and Agate are the architects for the interior; and Dr. S. L. Pierce is the engineer-in-chief.



THE CASE FOR THE PYLON

THE Electricity Grid is now complete. It has rightly been acclaimed as a model piece of planning, and is in fact one of those admirable pieces of accidental socialism that we in this country (at once the most tory-minded and democratically gifted of nations) have a way of bringing about; without ever labelling them specifically, thus avoiding all the revolutionary implications that new terms present to our minds.

However, it is not with the political aspects (interesting though they may be) of the Electricity Grid that we can yet be concerned, and little with the economic ones, but with its purely visual aspects; for its value as an economic factor cannot be properly assessed until its connections are finally linked up at the end of the year, and the grid system is working as a creative machine; but as a physical presence it is already complete.

The form its presence takes for the man in the street, or rather in this case for the man on a country walk, is that of pylons—and the wires they carry. Now the pylon as an isolated object can easily be accepted by most people as a beautiful thing, and particularly by the architect, who is accustomed, may we hope, to examine objects in terms of the work they have to do; but to accept it also as an inevitable part of the English landscape has been infinitely harder. Its arrival has been a matter of worry to those who have the preservation of the countryside most at heart, and has been the subject recently of strongly expressed opinion—many regarding the pylon as a criminal intruder. It is worth while, for this reason, briefly to analyse its real relation to other topographical features.

The outstanding characteristic of the English landscape is that it is man-made. It is most typically English when it is most intensively pastoral; that is to say, when its form has been most thoroughly moulded by the successive generations who have cared for it, to allow its climatic and organic resources to be most comfortably organized. Further, the English landscape has the virtue of being able to assimilate as part of itself everything that is honestly brought into it as a process in this human organization of natural resources, and to assimilate it so successfully that if it were removed a vacancy would be left. It is this quality that gives it not only its vitality but its unique solidity, so that the whole of history can be left behind it.

The most recent example of man's co-operation in producing a completely cultivated landscape is the arrival of the Electricity Grid, and its visible evidence —the pylon. These represent merely another way of making use of available natural forces—in this case of steam power for the production of light and energy. As such the pylon only differs chronologically and in no sense in kind from the hedge, the mill, the canal or the railway. The hedge, to take what must have been one of man's earliest alterations to the landscape, represents division of property; the pylon, distribution of energy. Both are stages in the evolution of a mutable but permanent background. Neither, for this reason, is an intrusion; our resentment of the last means only that in our minds we have not yet admitted it into our own conception of what the landscape should contain.

A precise parallel to the present discontent at the arrival of the pylon on the English scene can be found in the arrival of the railway in the middle of last century. Then as now the unfamiliar forms were regarded as a menace to the beauty of the landscape and as despoilers of the England people knew, but the fight against their acceptance was lost from the beginning because the railway was an inevitable part of the country's growth. Now it has been completely assimilated. The railway is as much a part of the landscape as the lanes and haystacks. The shining metals narrowing into the distance and the trail of white smoke along the horizon are an integral part of many hill-top views and essential pieces of characteristic colour. The sore places where the cuttings were made have grown over. Soon the damaged copses where the pylons were planted will also have grown over and we shall have acquired the same affection for the electric cables that leap across a valley in one stride and give it the scale that proves the human touch, as we now have for the railway crawling at the bottom.

The English landscape is still alive and remains the basis on which the country grows; but we must accept those importations that are an honest contribution to its effective cultivation, if it is not to lose its vitality and become preserved into a dead existence with only the functions of a museum or recreation ground.

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NOTES & TOPICS

THIRTY-STOREY SKYSCRAPER DWELLINGS

I WANT to know whether Mr. Rowse, who gave the second of the A.A. series of Saturday afternoon lectures on the Slum Clearance Problem, can bring figures to substantiate his claim for thirty-storey skyscraper dwelling blocks as a solution.

*

The case for standardized horizontal planning is a strong one, but is the case so strong for horizontal planning *up-ended*, so that every movement up and down has to be paid for in *current* and not capital expenditure?

*

I know that Le Corbusier's picture of glass towers rising from trees seems to be worth fighting for, but I want figures for all-in costs versus areas to be cleared of all building, and I want exact information of the life to be led in a normal flat on the twenty-fifth storey.

*

And when I say I want this figure I do not say that the idea appals me or that I think it mad and ridiculous. I think it improbable and costly, but I would like to have comparable figures, density for density—and someone should be getting these out—but intelligently mind you, and not to prove a point.

SLUM ON THE AIR

Sir Hilton Young, in his broadcast talk on Monday night, got through, if at all, by the skin of his teeth. Not that Sir Ernest Simon had ammunition with which to rout him, for it was Miss Irene Barclay's searching doubts that made Sir Hilton's enthusiasm pale a trifle.

*

What struck me, listening intently to the preliminary *exposé* of Government proposals, was the stress laid upon figures, i.e., achievement yet to be consummated, and the comparative silence upon a plan of action, other, that is, than a very constant reference to local authorities. "If there were a few (of these) who lagged behind," said Sir Hilton Young, "Parliament had charged the Minister of Health with the duty of spurring them on, and that duty would be duly discharged." I have heard that before.

*

In fact, there was a deal of complacent enthusiasm from the Government in Whitehall which found no echo whatsoever in St. Pancras.

HOUSING AND ARMAMENTS

A correspondent writes:

> In the London Slum Issue I read that the Government is spending 12 million a year on housing and 120 million a year on armaments—for "defensive" purposes, of course.
>
> Your leader writer's comment was that it cannot be a just reflection of public opinion when the budgetary estimates for the fighting forces are ten times greater than those for necessary and productive developments like housing.
>
> The truth of this remark was proved almost on the same day by the results of the Fulham by-election. "All accounts agree" said *The Times*, "that the two most prominent issues at this election were what was called War versus Peace in foreign affairs and housing in home affairs."
>
> Public opinion expressed itself in favour of smaller expenditure on armaments (peace) and greater expenditure on housing by turning 19,000 votes over to Mr. Wilmot.

*

True. But it is not much use calling for disarmament until we can get a disarmament treaty. The average man's reaction is "I want a house, but I want it guarded."

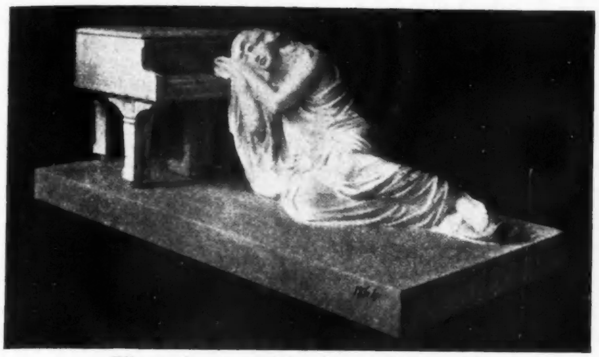
*

The answer to that seems to be: "But is it sensible for every pound you spend on a house to spend ten pounds on guarding it?" Suppose one had to pay two thousand pounds insurance on a two hundred pound car.

*

Of course, the analogy is not just. Still, if we spent even the same amount on housing as we spend on armaments, we could, in five years, build nearly all the 1,400,000 houses which are needed to clear out the slums (according to the figures in last week's issue of the JOURNAL).

Next week we shall devote sixteen pages of the JOURNAL *to the second of our series of Information Supplements. This will deal with kitchens, their planning and equipment, and will include articles on large and small kitchens; hotel and institution kitchens; and electricity in the kitchen. The loose Information Sheets will be devoted to kitchen lay-outs and refrigerators.*



The tomb : a musician honoured in marble.
[*From* THE STONE TRADES JOURNAL]

In the same period the Minister of Health proposes to build 210,000 houses. If one allows for the normal yearly increase in the number of families, one can see this will not—in the language of our rulers—very materially affect the present deplorable situation.

THE A.A. SMALL VILLA PROPERTY COMPETITION

I hope the small house competition instituted by the A.A. will be the last occasion when architects will be called upon to compromise with the speculative builder.

*

All these attempts to get together in order to see house building from the successful speculators' point of view are so much beating of the air.

*

Architects have an enormous contribution to bring to the subject of housing, but not by such means as this, or under conditions so cramping of all initiative, logic or even common sense.

*

In the Gidea Park small house competition we have yet to see whether more generous conditions *controlled* to a much greater extent by a jury appointed by the R.I.B.A. will succeed in producing designs with a future.

*

Even this competition, being for houses and not groups of houses, cannot go all the way. But it may take us towards the next stage.

A NEW MOVEMENT FROM NORWAY ?

Two architects who have just returned from holidays in Norway, have told me identically the same thing about the " birth of a movement." Each in his own way led me to believe that Norway is about to impinge upon our architectural consciousness.

*

One knows the history of modern Swedish influence. First the 1923 Gottenburg Exhibition. The generous enthusiasms of the late Sir Lawrence Weaver. The clarion praises of things Swedish cried across England by Clough Williams-Ellis. The ultimate rousing chorus of *Svenska ! Svenska ! uber allës !*

*

Norway has been developing quietly suggestive thoughts about design, that are expressed in a national idiom as highly individual as the Swedish. Presently there may be an exhibition in Oslo.

*

The Swedish movement was actually English in origin. (Not the first English idea that has been " bedded-out " in foreign soil.) William Morris was taken more seriously in Sweden than he ever was in England.

*

I gather that the Norwegian movement is more deeply national, and owes little or nothing to contemporary Continental ideas.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, November 2

AUCTIONEERS' AND ESTATES AGENTS' INSTITUTE. At 29 Lincoln's Inn Fields, W.C.2. " Dilapidations : from the Standpoint of the Surveyor and Estate Agent." By Arthur H. Davis, F.S.I. 7 *p.m.*

WORSHIPFUL COMPANY OF CARPENTERS. At the Carpenters' Hall, Throgmorton Avenue. " Fire Resisting Construction." By W. H. Ansell, M.C., F.R.I.B.A. 7.30 *p.m.*

GEFFRYE MUSEUM. At the Museum, Kingsland Road, Shoreditch, E.2. " Stories of the Tower of London." By Walter G. Bell, F.S.A. 7.30 *p.m.*

CHADWICK PUBLIC LECTURES. At 26 Portland Place, W.1. " Sanitary Arrangements in Mediæval Monasteries." By Dr. Percy Fleming. 5.30 *p.m.*

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. At the Science Museum, South Kensington. " The Work of the British Non-Ferrous Metals Research Association for the Building Industry." By G. L. Bailey. 7 *p.m.*

Friday, November 3

ROYAL SOCIETY OF ARTS (Indian Section). *At John Street, Adelphi, W.C.2.* " Treasures of Art in Hyderabad." By Sir Akbar Hydari. 5 *p.m.*

Saturday, November 4

Sunrise 6.57 a.m. Sunset 4.29 p.m.

Monday, November 6

R.I.B.A. At 9 Conduit Street, W.1. Inaugural Address by the President, Sir Giles Gilbert Scott. Unveiling of Portrait of Past-President. 8.30 *p.m.*

Tuesday, November 7

INSTITUTION OF CIVIL ENGINEERS. At Great George Street, S.W.1. Address by the President, Sir H. P. Maybury, G.B.E., K.C.M.G., C.B. 6 *p.m.*

ROYAL SOCIETY OF ARTS. At Merchant Taylors' Hall, 30 Threadneedle Street, E.C.4. Dinner. 8.15 *p.m.*

INSTITUTION OF ELECTRICAL ENGINEERS (North Midland Centre). *At the Hotel Metropole, King Street, Leeds.* " An Analysis of the Costs of Electricity Supply and Distribution in Great Britain, with some suggestions as to the causes of and remedies for the slow rate of development." By J. M. Kennedy and Dorothy M. Noakes, B.SC. 7 *p.m.*

Wednesday, November 8

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS. " Italian Mediæval Architecture : III." By Sir Banister Fletcher. 6 *p.m.*

MANCHESTER SOCIETY OF ARCHITECTS. At the Society's premises. Presidential Address by J. R. Adamson, F.R.I.B.A. Exhibition of work of Messrs. Bradshaw, Gass and Hope. 6.30 *p.m.*

INSTITUTION OF WELDING ENGINEERS. At the Institution of Mechanical Engineers, Storey's Gate, S.W.1. " Planning for Production by Welding." By G. M. Buchanan, A.M.I.E.E. 7.45 *p.m.*

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Discussion on " Relative Fuel Economy of Electricity, Gas, Oil and Solid Fuel as Heating Agents." 6.45 *p.m.*

ARCHITECTURAL ASSOCIATION. At 34-36 Bedford Square, W.C.1. Annual Exhibition of Members' Watercolours, Etchings and Drawings. Until November 22.

NEWS

POINTS FROM THIS ISSUE

The most recent example of man's co-operation in producing a completely cultivated landscape is the arrival of the Electricity Grid, and its visible evidence—the pylon 557

“ If we spent even the same amount of money on housing as we spend on armaments, we could, in five years, build all the 1,400,000 houses which are needed to clear out the slums ” 558

“ The Town Moor, one of the glories of Newcastle, should be for ever kept an open space ” 560

Planning on a large scale with adequate foresight and in co-ordinated units is the only way of effectively facing the problem of suburban design ; and it rests with the architect to foster the first advances towards this ideal 578

The manufacturer. . . is only too willing to encourage the architect to learn enough about his product to enable him to design intelligently in it, and to demonstrate its possibilities and limitations 582

COTTAGES IN THE STRAND

The two cottages erected in front of Bush House, Strand, from the design of Mr. N. E. Leeson, the winner of the Building Centre Cottage Competition, have been taken over by the Committee of the “ New Homes for Old ” Exhibition, and will be used as their offices for the next six months.

NORTHERN ARCHITECTURAL ASSOCIATION

The first meeting of the new session of the Northern Architectural Association was held at Newcastle-on-Tyne last month, when the President, Col. William Milburn (Jnr.), T.D., B.SC., F.R.I.B.A., delivered his inaugural address. The President, in the course of his address, said :

“ Town Planning under the 1925 and preceding Acts has undoubtedly been of very great value in controlling the development of the unbuilt areas of the country, and now that the 1932 Act applies control to the built areas, I should like to see the broad outlines of a plan for each of our towns prepared. It seems to me that the opportunities which will arise in the next five years may never occur again for 100 years, and I do think it desirable to make the most of the present great opportunity.

“ To illustrate my meaning, I have heard many suggestions for the siting of the new municipal buildings for Newcastle-upon-Tyne. I have also heard it suggested that there should be a fusion of the Tyneside municipalities, and I suggest that if such a fusion should ever take place, it is quite possible that a site for the new municipal buildings might be found on the south side of the River Tyne. Such a site had a precedent in the case of the London County Council who built their new County Hall on the south side of the Thames. Such a solution would also remove the threat of building upon the Town Moor, which I consider one of the glories of Newcastle, and in my opinion should be for ever kept an open space. I further suggest that the present time is the opportunity to consider and explore the possibilities of new bridges across the Tyne at St. Anthony's or otherwise, and to consider again the question of the communications between South Shields and North Shields, either by a tunnel or a new high level bridge.”

FURTHER FALSE “ ECONOMY ”

The continuance of false “ economy,” in spite of statements to the contrary, is indicated not only by the height of the unemployment figures for the public works side of the industry, but also by the following concrete examples.

The County Surveyor of Kent, in his report for the last financial year, states that it would not be economical to spend large sums on the repair and resurfacing of certain lengths of important highway since improvement schemes are held up, and adds the serious warning that, unless the postponed improvement schemes mature shortly, a large expenditure must be incurred in keeping those lengths of road in good condition.

Again, the Chairman of the Public Health Committee of the Horbury U.D.C. admitted at a recent enquiry that the Council had practised economy to such an extent that they had allowed the sewage disposal works to get into a very bad state of repair, and certain equipment had broken down beyond repair.

The Special Committee for Public Relations of the Building Industries National Council will continue to press for the resumption of useful improvement schemes and for a clear statement from the Government concerning “ economy ” of this kind.

Subscriptions towards the funds of this Committee should be addressed to the Hon. Treasurer, at 5 Duke Street, Adelphi, W.C.2, and should be made payable to “ The Special Committee for Public Relations.”

GLASGOW INSTITUTE OF ARCHITECTS

Sir Giles Gilbert Scott, R.A., P.R.I.B.A., was the guest of honour at the annual dinner of the Glasgow Institute of Architects, held at Glasgow on October 26. Mr. T. A. Graham Henderson, F.R.I.B.A. (President), occupied the chair.

Sir Giles Gilbert Scott, responding to the toast of “ The R.I.B.A.,” proposed by Professor J. Graham Kerr, discussed the subject of registration. He said he wished to take the opportunity of appealing to all those who were qualified to be registered to apply for registration before the time expired. After that they could only be admitted by examination.

Other speakers included Messrs. John Begg, F.R.I.B.A., A. B. Swan, and George A. Mitchell.

PLEA FOR 30-STOREY BUILDINGS

The second of the series of lectures arranged by the Architectural Association on the Housing Problem was held at 34 Bedford Square on Saturday last, when Mr. E. E. A. Rowse spoke on “ The Solution for the City.”

After dealing in detail with the slum problem, the lecturer said :—“ Today there is talk of ten-storied buildings. Ultimately these will prove entirely inadequate, if the problem of urban life is to be solved. We must be prepared to ascend to twenty or thirty storeys to conserve our precious open spaces. These heights can be attained by a programme of gradual addition. Wind pressure loads on the soil and fire risk have been adequately met. The only obstacle—the bye-laws—can be removed, if the weight of public opinion is brought to bear. The present height limit must be increased from one hundred to two or even three hundred feet. Vast as these dimensions appear, our greater towns will present to the observer the glorious picture of towering isolated forms rising out of trees. Contrasting this with the smoke obscured muddle of today, only astonishment can be expressed that no attempt at accomplishment has yet been made.”

WEST YORKSHIRE SOCIETY OF ARCHITECTS

The opening sessional meeting of the above Society was held at Leeds on October 26, when Mr. B. R. Gribbon, F.R.I.B.A., delivered his presidential address. Mr. Gribbon said :

“ Desirable as it is to abolish slums, and I wholeheartedly support the movement, we must remember that England is not all slums, and if, after centuries of tolerance we try to eliminate slums in five years we must distract work and material from normal building, with the result that while we are abolishing the old slums, we are tending to create new ones. The building industry, including the production of material, can deal with a great volume of work, but it has its limitations. If these are surpassed by calling upon it to deal with an undue proportion of slum work, there will be difficulties. The artisan house will be hit in two ways: it will have lost the subsidy and it will cost more to build.

"Industrial building will also be hit, just when it seems likely to be required, by increased cost and also because the industrialist is still paying the cost of the unemployment caused by last year's inaction."

A vote of thanks to the president was moved by Alderman Wm. Illingworth (Bradford) and seconded by Mr. Percy Robinson (Leeds), a past president.

The result of the Society's prizes for students was as follows:—Design: Mr. Geoffrey Davey, Ben Rhydding. Commended: Mr. J. A. Naylor, Batley. Measured Drawings: Mr. J. M. Knowles, Halifax. Commended: Mr. T. F. Winterburn, Huddersfield. "Halden" Essay: Mr. H. B. Morris, Brighouse. Commended: Miss Joan Broadbent, Leeds.

PROFIT SHARING IN THE CONSTRUCTIONAL TRADES

At a luncheon to be held by the Industrial Co-partnership Association at the Holborn Restaurant to-day, Mr. P. Malcolm Stewart, the chairman of the Associated Portland Cement Manufacturers, Ltd., and of the London Brick Company and Forders, Ltd., will describe the actual working of the profit-sharing bonus scheme in the companies which he directs. The chair will be taken by Viscount Cecil of Chelwood, Joint President of the Association.

ARCHITECTURAL ASSOCIATION

Mr. C. Lovett Gill, F.R.I.B.A., delivered his presidential address to the Architectural Association on Tuesday.

Mr. Gill said: "Slum clearance will mean new shopping and marketing centres, clinics, libraries, schools, churches, chapels, baths, wash-houses, hospitals and places of business and recreation. Who are more fitted to advise on these matters but the trained architects? Government works are required, for example: buildings for the Post Office, telephone exchanges, and electricity stations. It is not conceivable that all these works will be monopolized by H.M. Office of Works. The private architect must demand a share.

"The next transformation which must take place is the rebuilding of agriculture, which will rise to the status of the leading national industry. Think of the scope for architects in the designs for farm buildings, vegetable and fruit canning factories, and the necessary housing that this development will demand."

MARS

The MARS (Modern Architectural Research) Group has arranged a special lecture, with lantern slides, to be given by Dr. Neurath, of the Mundaneum Institute, Vienna, on Tuesday, November 14, at 8.45 p.m., at the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1.

At the Alliance Assurance Company's Head Office, Bartholomew Lane, E.C.: One of the service doors leading from the staff dining room to the kitchen. (See pages 572-575.)

The subject will be: Pictorial Statistics for Housing and Town Planning. (Chairman, Mr. John Gloag.)

Dr. Neurath's mission is to establish the international use of the Vienna pictorial method, and to explain this method as applied to all branches of social analysis, in this case Housing and Town Planning analysis.

RESTRICTION OF BUILDING

The Manchester Guardian, in a recent issue, published the following: "The difficulty of preventing the disappearance under haphazard building enterprises of the rural aspects of large tracts of the country was evident at the annual conference in Buxton of the Council for the Preservation of Rural England. Mr. Pepler, of the Ministry of Health, thought that England was too small for complete reservation as national parks of considerable stretches of country. The better way, he thought, was the control of the development and use of land. He suggested that control might be exercised through the action of regional planning committees in co-operation with the National Trust. It is not easy to imagine how an evil so persistent and widespread could be coped with by such methods and without more drastic interference with the rights of private landowners. But nobody at the conference advocated any radical change by way of the national control of land."

In a further article in the same paper the following points are made from the speeches of Mr. Pepler, Chief Town-Planning Inspector of the Ministry of Health, and Mr. Henry Stone, clerk to the Rural District Council of Basford, Nottingham, and a member of the Executive Council of the Rural District Council Association of England and Wales:

"Mr. Pepler made the point that in planning the Peak District it was necessary to balance the aims of urban communities who regarded it as a playground and those of rural communities which rightly looked on the country as the place where agricultural and rural pursuits should receive first consideration. . . .

". . . What was wanted was not to interfere with the proper development, use and cultivation of the land, but to prevent incongruous things happening. . . ."

THE BUILDING INDUSTRIES NATIONAL COUNCIL

The half-yearly meeting of the above Council was held at the R.I.B.A. on October 25. In the absence in America of the President, Sir Raymond Unwin, PP.R.I.B.A., the chair was taken by the

Vice-President, Mr. Sydney Tatchell, F.R.I.B.A.

The report of the Technical Committee of Review showed that considerable progress had been made in progressive standardization within the industry. It is hoped that in the near future a working arrangement between the British Standards Institution, the Building Research Station and the Council will be brought into operation.

Further consideration was given to the possible mitigation of booms and slumps in the industry, and it was reported on behalf of the Special Committee for Public Relations that this important matter was still being investigated, and that a comprehensive report would be forthcoming in the near future.

The effect upon the industry of the present system of rating assessments of buildings was also considered, and it is probable that a special Sub-Committee will in due course be appointed by the Council to examine the position.

Delay in the approval of building proposals resulting from prolonged administrative action on the part of local authorities was considered by the Council, and representations to official quarters on this matter are likely to be made.

The question of inferior buildings, particularly of small dwelling-houses, was also considered by the Council. Representations were made that there was an increasing amount of such work being executed, and that in the public interest and that of the industry some protective action should be taken. The matter is regarded by the Council as important, and will be further investigated.

A recommendation was made to the Council that the Special Committee for Public Relations be now constituted a permanent committee of the Council, charged with the duty of educating public opinion on the economic benefits which are enjoyed by the country generally as a result of prosperity in the building industry, and furthermore, to form a liaison between the public and the industry in order to promote such an understanding.

COMPETITION NEWS

A.A. COMPETITION

The result of the Small Villa Property Competition, organized by the Architectural Association in conjunction with Messrs. John Laing and Son, Ltd., was announced last week as follows:

Group I—First prize (£25) for detached houses only: Geddes Hyslop, A.R.I.B.A., of 6 Gordon Place, W.C.1. Commended: Philip B. Herbert, of Hampden-in-Arden, Birmingham, and (Miss) Frances Barker, A.R.I.B.A., of 2 Heene Corner, Worthing, Sussex.

Group II.—No premium awarded. Commended: Philip B. Herbert (address as above).

Group III.—Premium (£25): Philip B. Herbert (address as above). Commended, for plan only: Crouch, Butler and Savage, FF.R.I.B.A., of 67A New Street, Birmingham.

The premium (£25), which was not awarded in Group II, has been divided between the authors of the designs commended in Group I.

One hundred and ninety-two designs were submitted in the competitions, divided as follows: Group I: 79 designs; Group II: 62 designs; Group III: 59 designs.

The whole of the designs are now on exhibition at the Architectural Association, 37 Bedford Square, W.C.1.

A critique of the competition, together with the winning designs, appears on pages 578–580 of this issue.

BEXHILL COMPETITION

At a meeting of the Bexhill Corporation, in connection with the Coastguard site competition, it was stated that the Council is prepared to consider an expenditure of £60,000 for the proposed work.

Competitions Open

December 4.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor: Thomas S. Tait, F.R.I.B.A. Premiums: £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1. The conditions were reviewed in our issue for September 28.

December 15.—Sending-in Day. Messrs. Jenson and Nicholson invite designs for the decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1.

No date.—Mr. J. P. Turner, J.P., of Cardiff, invites architects and town planners to submit designs for the lay-out of a building estate of about seven acres at Penylan Hill, Cardiff. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £100, £50 and £25. Conditions, etc., obtainable from E. Turner and Sons, Ltd. Penarth Road, Cardiff. Deposit £1 1s.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Proposed Extensions to the Town Hall, Swindon. Assessor: Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere A.R.I.B.A.

Proposed Town Hall and Municipal Buildings, Stoke Newington. Assessor: Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

R. I. B. A.

THE NEW SESSION

The new session will be opened by a general meeting on Monday next, November 6, at 8.30 p.m., when the President, Sir Giles Gilbert Scott, R.A., will deliver his inaugural address and the portrait of Sir Raymond Unwin, Past President, which has been painted by Sir George Clausen, R.A., will be unveiled and presented to the Royal Institute.

ELECTION OF MEMBERS

At a Council meeting, held on October 23, the following recent Members were elected:

As FELLOWS (6): Messrs. S. C. Clark, A. F. Hooper, G. Whittaker, C. E. Fox, P. B. Rigg and E. A. Sutherland.

As ASSOCIATES (19): Messrs. H. A. Bartlett, L. G. Cahn, A. M. Chitty, A. L. Cooper, H. O. Corfiato, L. A. S. Drake, M. A. S. Dugdale, W. P. Dyson, K. F. Giraud, J. B. Iles, S. C. G. Lambert, F. H. Littler, (Miss) J. McIntosh, M. W. Padget, A. G. Savill, R. T. F. Skinner, J. C. Todd, B. P. Westwood and A. G. Wise.

As LICENTIATES (7): Messrs. T. W. Applegath, F. A. Coles, R. S. Dixon, C. Edwards, A. S. George, R. B. Liddington and F. G. Limmer.

EXAMINATIONS

The following are the dates on which the forthcoming examinations will be held:—

Final Examination.—December 6, 7, 8, 9, 11, 12 and 14, 1933 (last day for receiving applications, November 6, 1933).

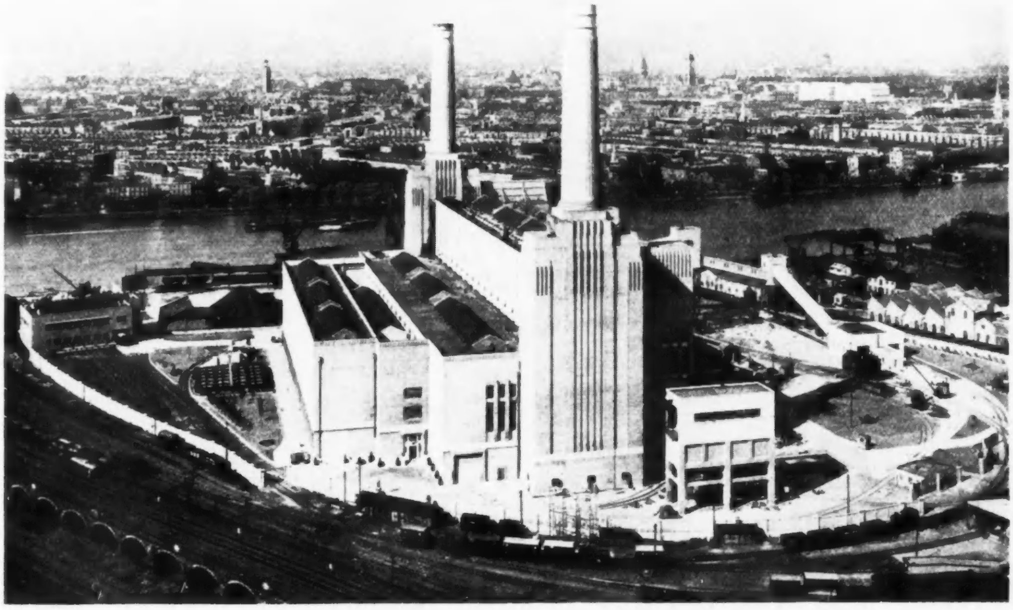
Special Examination.—December 6, 7, 8, 9, 11 and 12, 1933 (last day for receiving applications, November 6, 1933).

THIS ARSHETECTURE

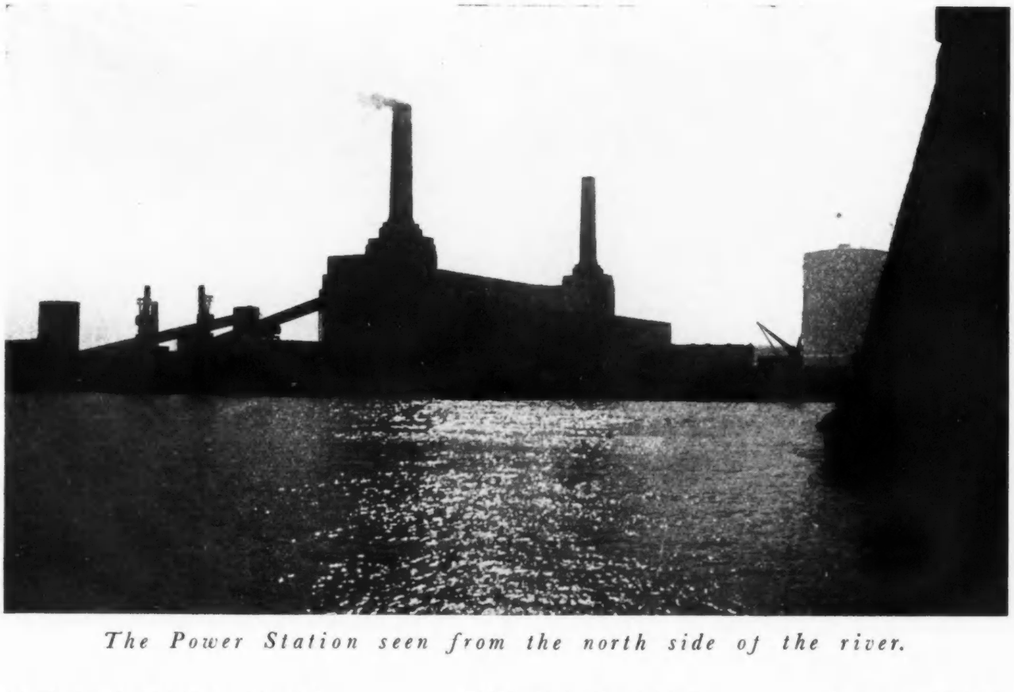
It is possible to reduce the cost of a house you build in several ways. By choosing a plan that the builder has already used you will save an architect's fees.

—*From* HOME-MAKING.

BATTERSEA POWER STATION



A general view from the south. The portion now built represents one half of the projected scheme; there will therefore eventually be four chimneys, grouped about the centre of a symmetrical building.



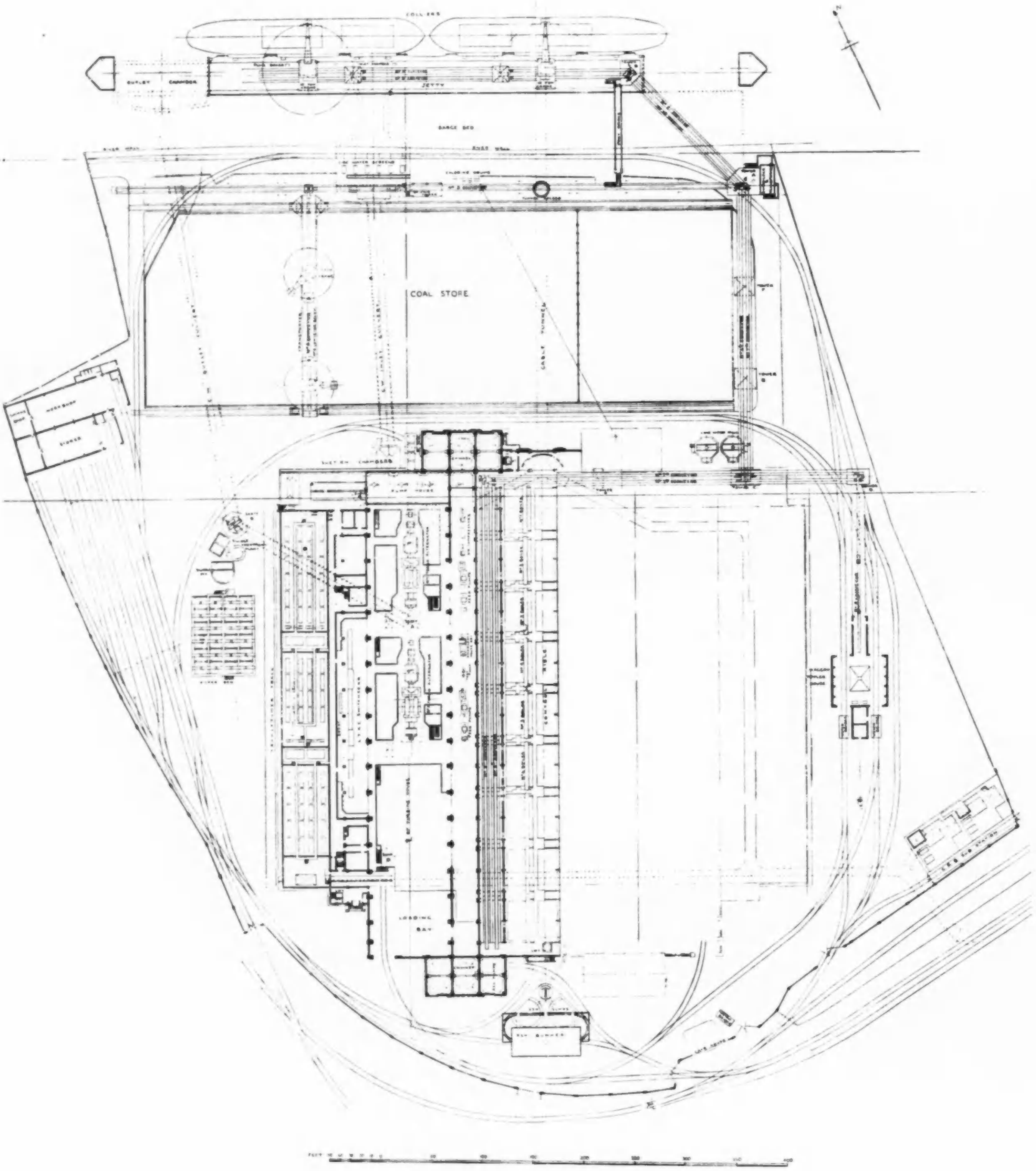
The Power Station seen from the north side of the river.

SIR GILES GILBERT SCOTT, R.A.
(Architect for the exterior).

HALLIDAY AND AGATE
(Architects for the interior).

DR. S. L. PIERCE
(Engineer-in-chief).

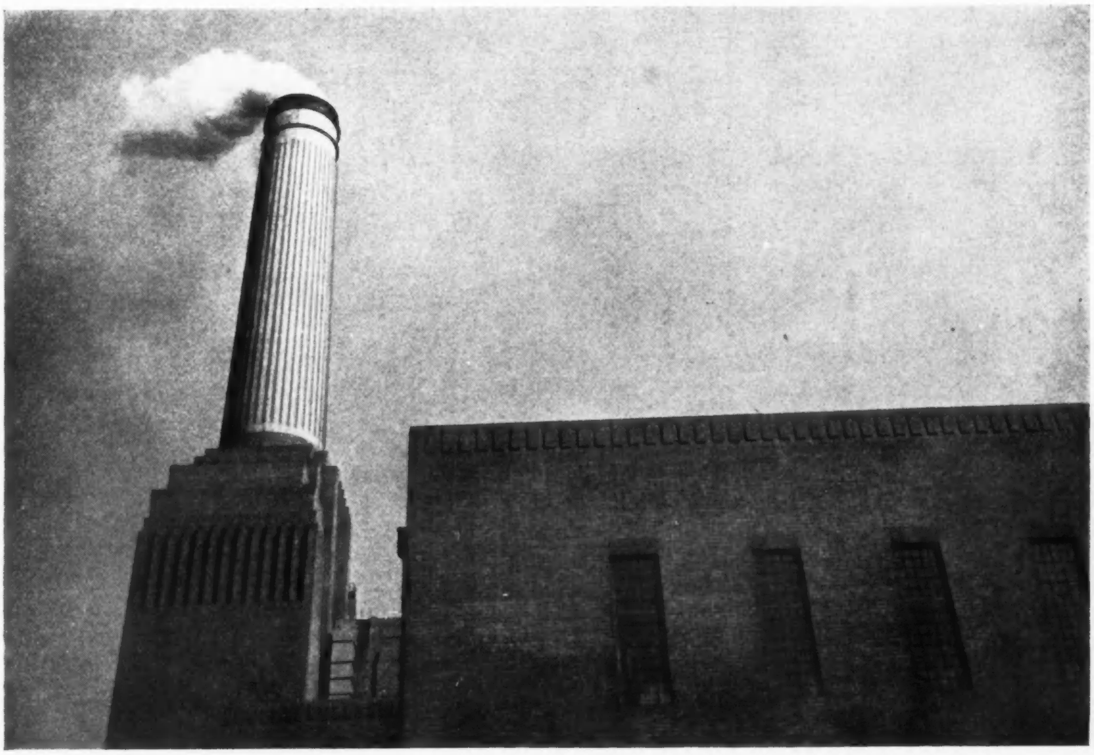
THE NEW POWER STATION


N
COLLIERS
OUTLET CHAMBER
JETTY
BARGE BED
RIVER WALL
COAL STORE
CABLE TUNNEL
WORKSHOP
STORES
PUMP HOUSE
SUCTION CHAMBERS
LOADING BAY
FEET

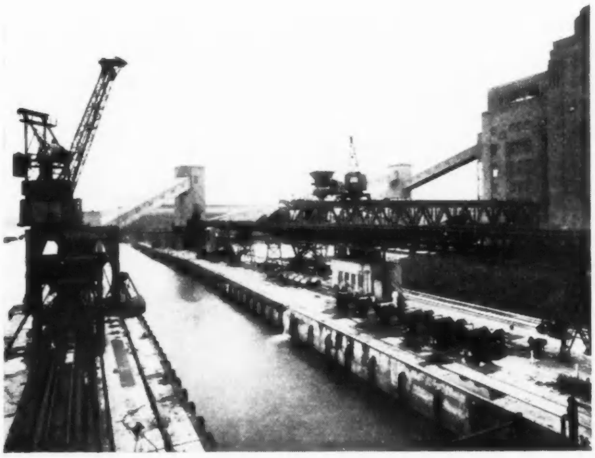
SITE PLAN

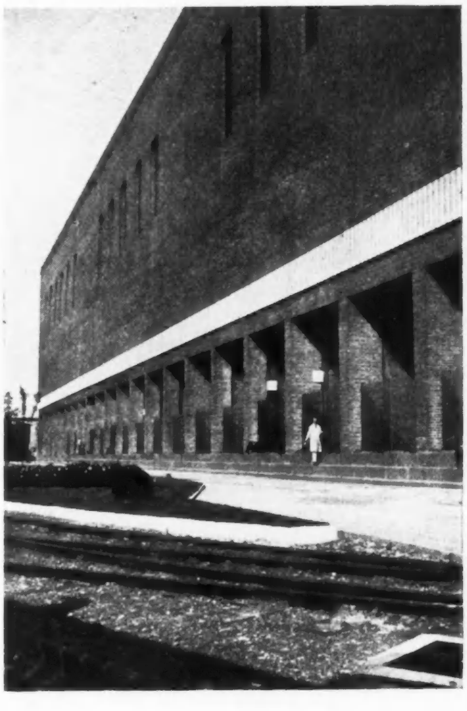
SIR GILES GILBERT SCOTT, R.A. (Architect for the exterior); HALLIDAY

AT BATTERSEA, S.W.



A detail of the brickwork at the base of the chimney and at the top of the wall of the transformer house.



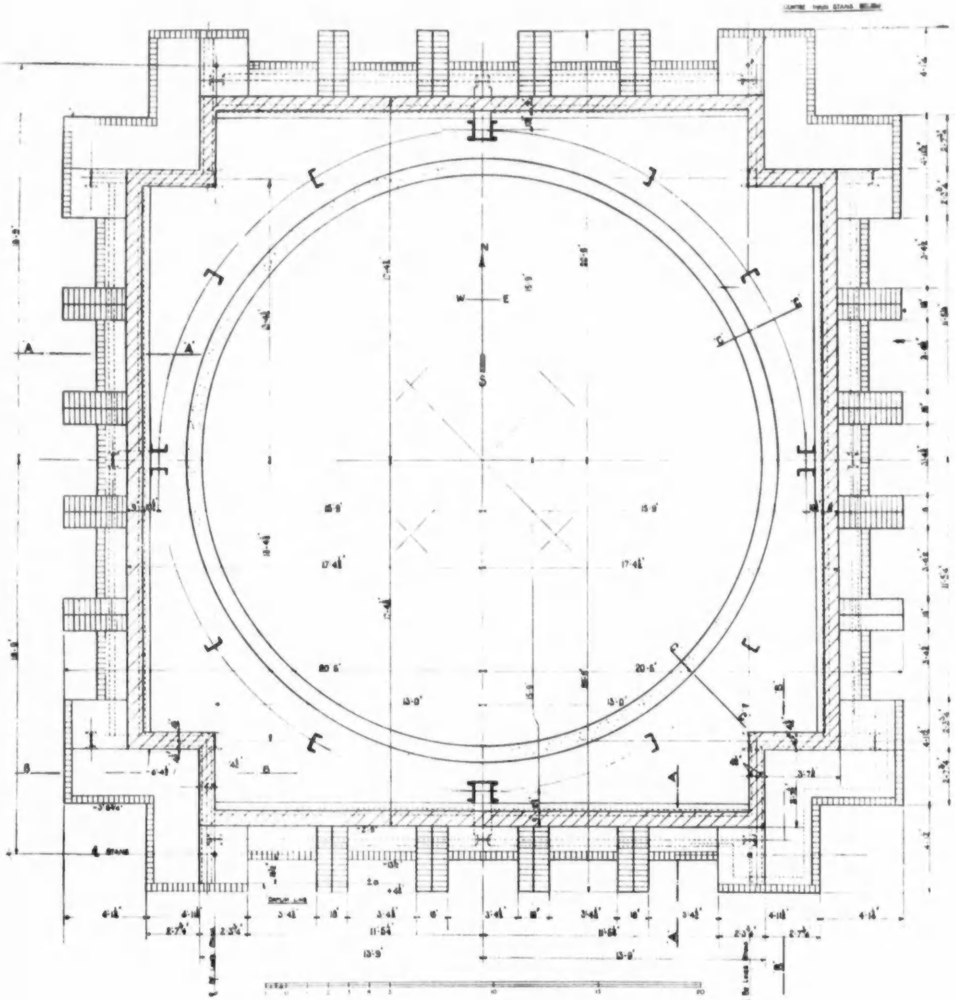


Above: The barge bed between the river wall and the floating jetty. The north end of the Power Station is visible beyond the coal dump on the right.

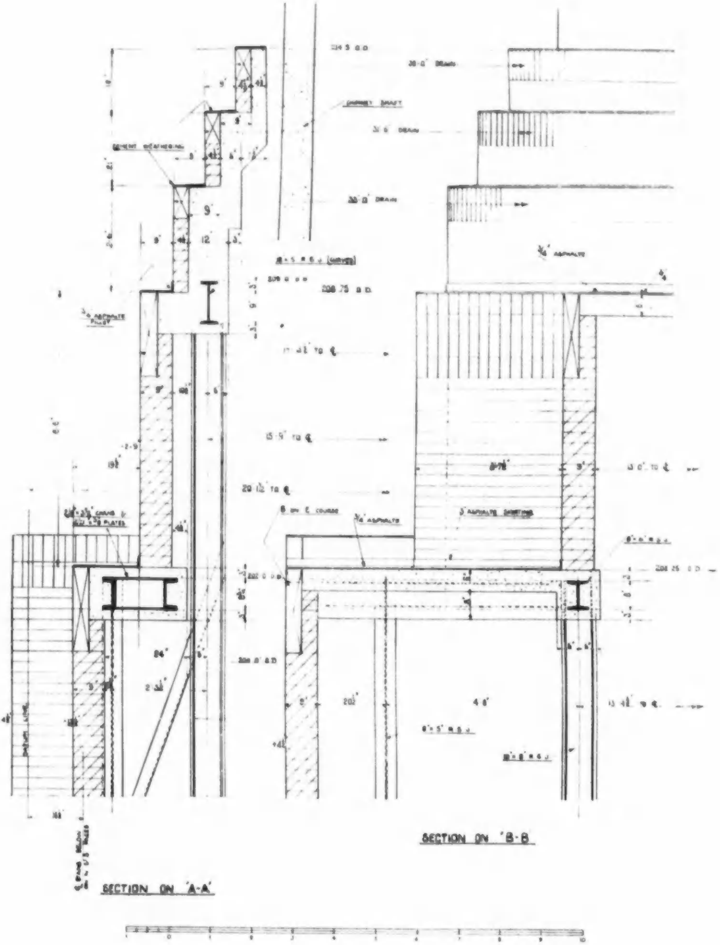
Right: The west wall of the transformer house.

AND AGATE (Architects for the interior); DR. S. L. PIERCE (Engineer-in-chief)

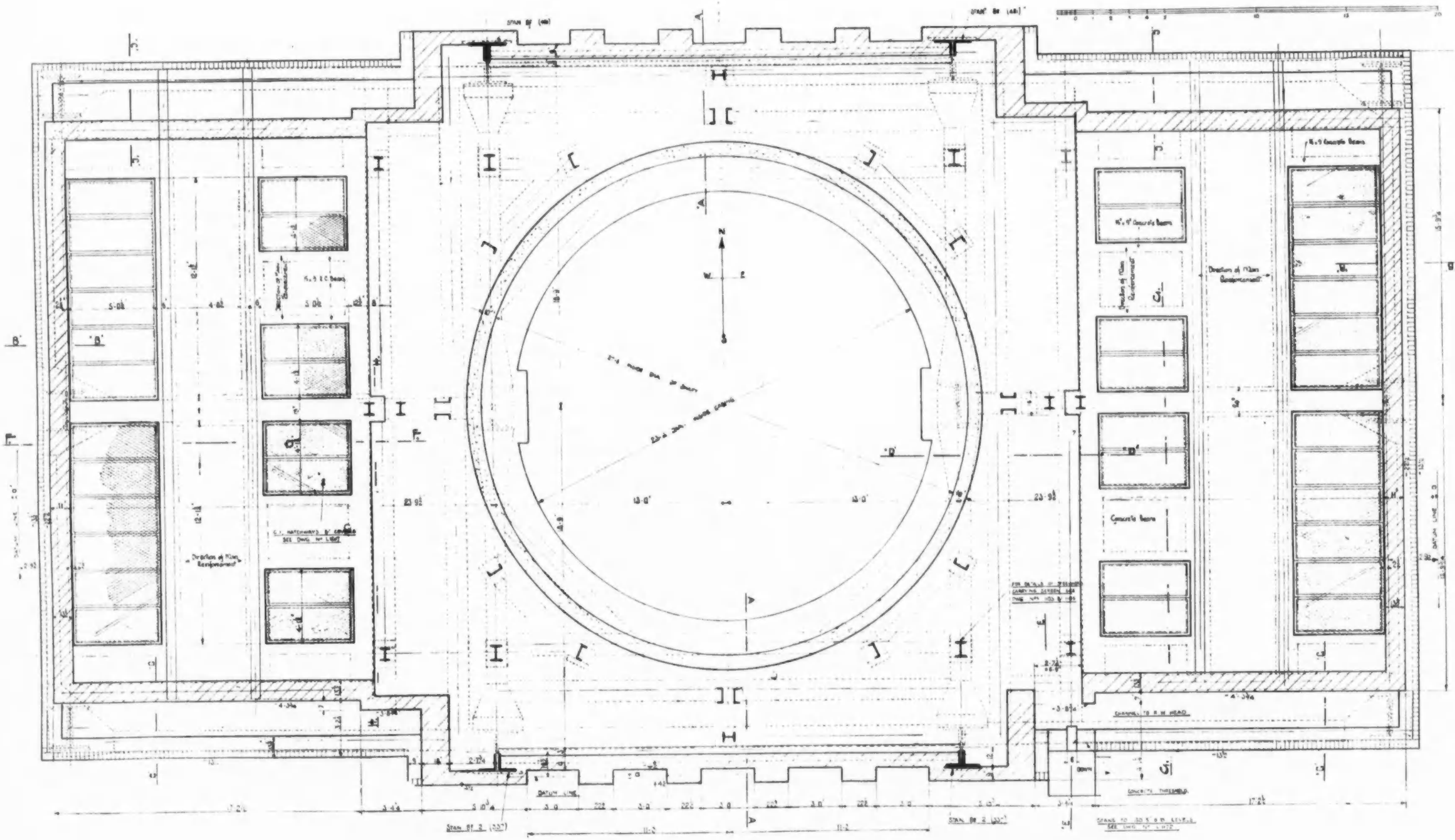
BATTERSEA POWER STATION



A plan through the chimney base at a height of 188 ft., looking down towards the projecting brick piers and wall enclosing the detached concrete chimney shaft.



Two sections through the chimney base; left, between the piers, showing the steel and concrete construction and the detached inner flue; right, section at the angle; see plan on this page.


N
W
E
'B'
'D'
Direction of Main Reinforcement
Concrete Beam
DATUM LINE
CHANNEL TO R.W. HEAD
CONCRETE THRESHOLD

A plan through the chimney base at a height of 166 feet.

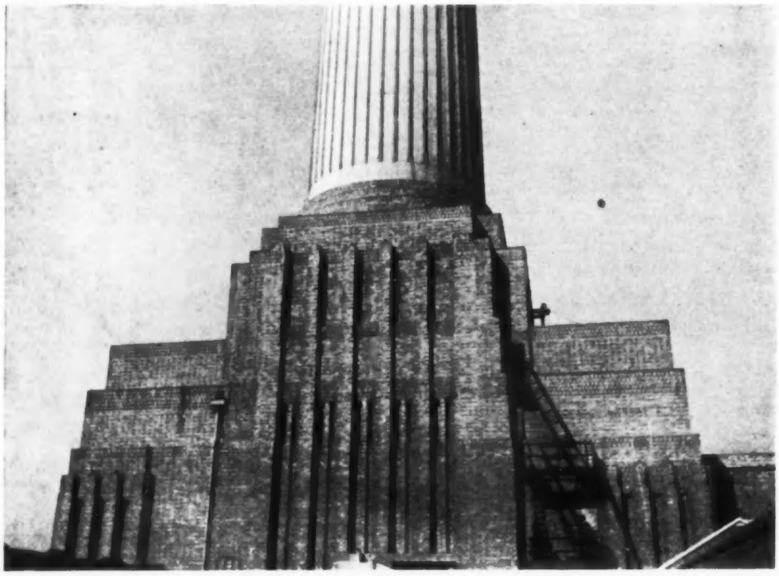
Each chimney is of reinforced concrete and rises to a height of 337 feet above ground level and is 181 feet high. It has an internal diameter of 28 feet at the bottom and 22 feet at the top. At the bottom the concrete chimney is 10 ins. thick, and at the top 6 ins. On the outer face of each chimney are 48 vertical flutings, 6 ins. wide by 3 ins. deep. All heights figured on the accompanying drawings are taken above datum, which is 15 feet below ground level.

SIR GILES GILBERT SCOTT, R.A.
(Architect for the exterior).

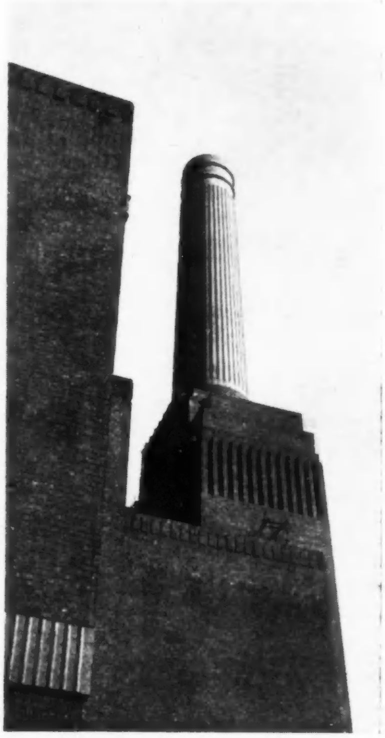
HALLIDAY AND AGATE
(Architects for the interior).

DR. S. L. PIERCE
(Engineer-in-chief).

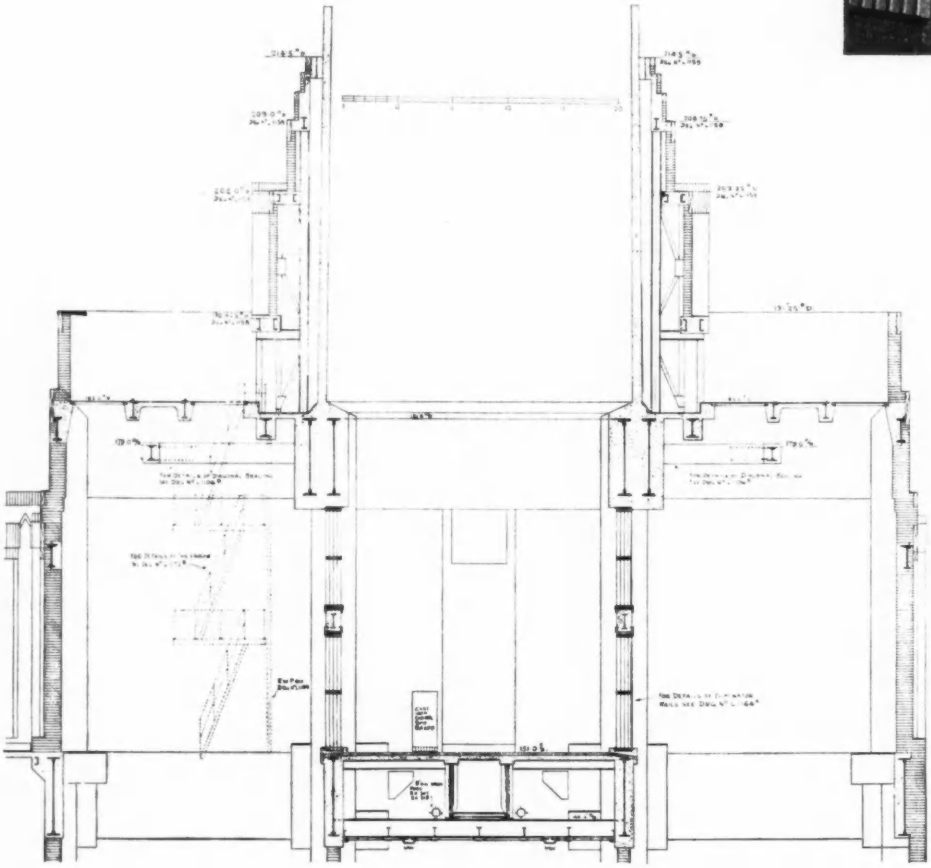
THE NEW POWER STATION



Detail of brickwork at the chimney base. The circular shaft is in concrete, painted with cement-proof paint.



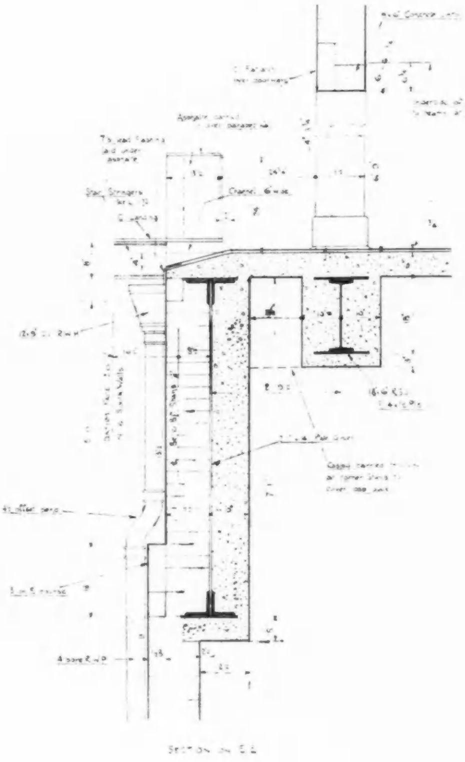
The south chimney seen from the south-west angle of the transformer house.

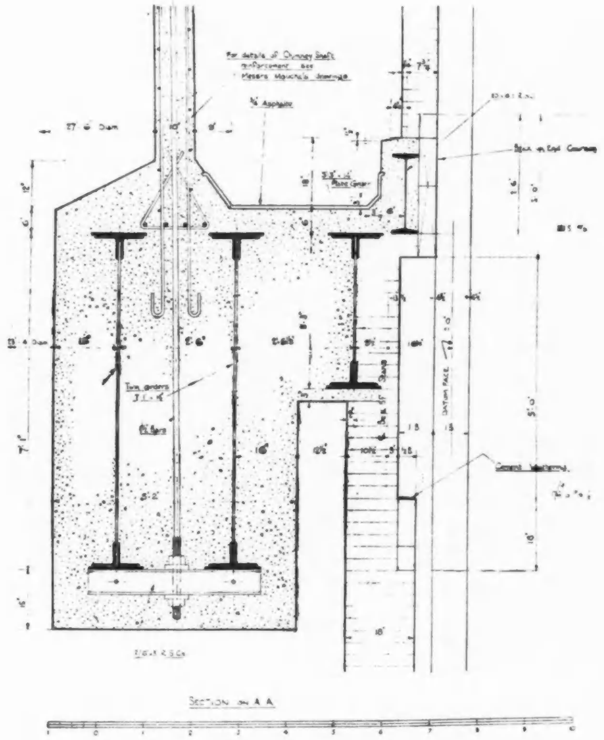


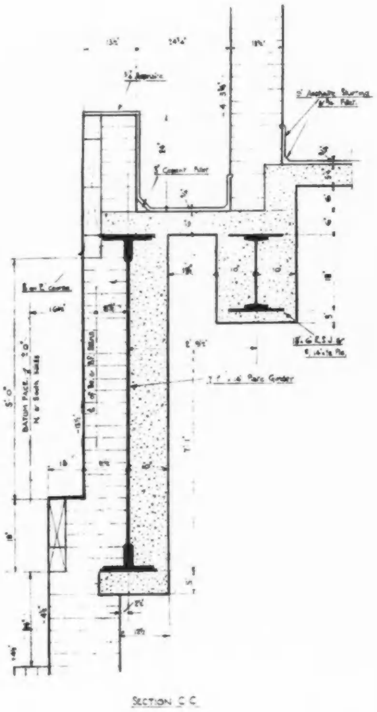
A general section through the north chimney tower at heights of 125 to 205 feet. At 200 feet the detached concrete shaft leaves the brickwork base.

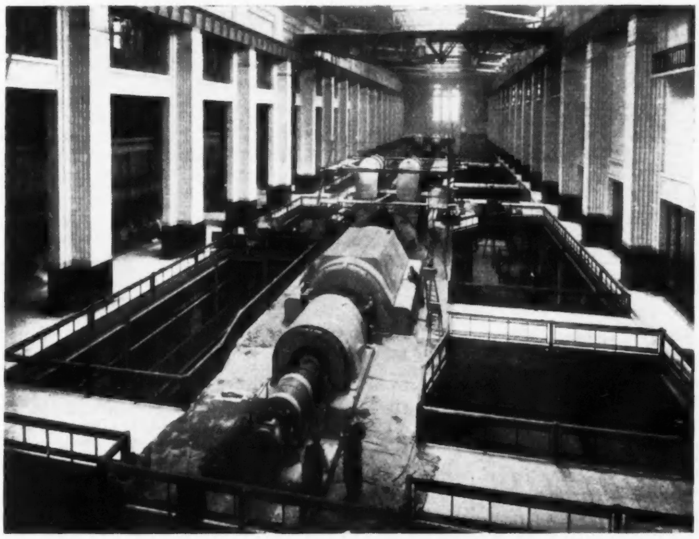
SIR GILES GILBERT SCOTT, R.A. (Architect for the exterior); HALLIDAY

AT BATTERSEA, S.W.


Section on E.E.


For details of Chimney Shaft reinforcement see Messrs. Mouchel's drawings
¾" Asphalte
27' 6" Diam.
Twin girders
Datum face
Cement Waterproofing
Section on A.A.





Above, left: section through chimney base on line E—E; right: section on line A—A. Below, left: section on line C—C: see plan on page 567; right: interior of the turbine house.

AND AGATE (*Architects for the interior*); DR. S. L. PIERCE (*Engineer-in-chief*)

LETTERS *FROM* READERS

SIR STAFFORD CRIPPS, M.P., K.C.
CHARTERED SURVEYOR
N. G. FIUMI
RAYMOND WALKER

Slum

SIR,—The problem of slum clearance is by no means an isolated problem; it is intimately bound up with the whole question of providing houses for the common people of the country.

The slums as we know them today are not the result of some fortuitous mismanagement of property by individuals, but are the necessary outcome of the method of development of housing property adopted by the country. Just as the narrow, winding, ill-kept and inconvenient roads and lanes of half a century ago were the outcome of haphazard road development by private individuals, so the slums, with their narrow ill-ventilated streets and insanitary and decaying houses, are the outcome of uncontrolled private enterprise seeking to make the maximum gain from one of the most essential needs of the people.

So long as private individuals can monopolize for their own gain the land of this country, so long will the power to create slums remain, and although there may be, and are, many good landlords who would not willingly create slums or allow them to continue, yet there are plenty of people who are only too willing to acquire and exploit working-class houses for their own profit, without any regard to the interests of the tenants or the community.

Any steps to rid the country of slums, however belated and half-hearted, are all to the good, but we shall never be able to deal comprehensively with the slum and housing problem until we accept it as a national liability and take the necessary powers to deal with it as such. The first step must be to obtain for the nation the ownership of the land, and the second must be to implement the principle that the provision of houses is a national service which must be provided irrespective of any idea of profit, as we provide roads or education, not for profit but for the use of the people.

Our slogan should be "one family, one dwelling," and we should not rest content until every family in the country has obtained a decent home with the privacy which can only come from the control of its own front door. This surely is not too much to ask.

STAFFORD CRIPPS

SIR,—Mr. Massey's statements in your last issue under the heading of (*a*) the Mile End Area and (*b*) Poplar, Recent Housing Work, are misleading as, to my knowledge

(*a*) Mile End Area. Blocks of up-to-date flats have been erected by the local authorities and private owners, apart from the Stepney Housing Trust;

(*b*) Poplar. The Chapel House Street Scheme was commenced in or about 1925. Your text gives the impression that the report by Mrs. Barclay and Miss Perry was made after this date and that the improvements of 1930 were consequent upon the report.

Undue prominence has been given, in dealing with slum clearance, to the necessity for rehousing, and one of the illustrated arguments used to support that necessity is the verminous condition of existing housing and accommodation.

A perusal of the reports made to the various housing committees will show that a number of houses on estates recently built, especially for working classes, have become verminous soon after occupation.

Whilst, therefore, rehousing is very necessary to slum clearance and avoidance of overcrowding, it is equally important that the attention of all parties, especially social workers, be directed towards the education of the so-called slum dwellers in cleanliness and their own responsibility to the community in general.

The present method of social work, whilst carried out with good intentions, produces an attitude of mind which encourages this class to accept their lot rather than strive to improve their conditions. Proof of this will be found in the recurring cases of overcrowding, even in new property.

Only by giving equal prominence to both the social and housing sides of this question can we hope to achieve any marked improvement in the condition of the housing of the people and their well-being.

CHARTERED SURVEYOR

International Exhibition, Milan

SIR,—As a member of the International Jury appointed to judge the merits of the various national exhibits shown at the Fifth International Exhibition of Decorative and Industrial Art and Architecture at Milan, I should like to express my high admiration of the British goods shown.

I am able to say, though I am not yet permitted to disclose the details, that Great Britain has secured from a highly critical jury a large number of high awards. They have been well earned.

Three years ago I was asked to assist in organizing an unofficial British Section at the Fourth International Exhibition. The Section then was generally recognized to be a beautiful and effective display of British decorative art. This year, however, the Section, now officially organized by the Department of Overseas Trade, is on different lines, viz.: industrial art—consequently its selling appeal is much more effective, and this is shown by the fact that sales three years ago were less than a twentieth of those in the British Section this year.

I understand that some adverse criticism has been voiced in England about the nature of the British exhibits.

Britain has no reason to be ashamed of its exhibits. As a method of bringing the quality and high skill of British workmanship more closely to the notice of Italy and the Italians, the British Section has been acclaimed on all sides as a conspicuous success.

N. G. FIUMI

Registration

SIR,—I am a registered architect, no longer attached to any body that is concerned with my professional conduct.

Having read with interest the claims and counterclaims of the various disciplinary bodies in the profession, and more especially the statements that have recently been made public regarding the Institute of Registered Architects, I felt it essential for my own interests that I should obtain a ruling on my position as a Registered architect of the "unattached" variety.

Accordingly I wrote to the Registrar of the Registration Council of the U.K., and the subsequent correspondence would seem to be of vital importance to all architects, whether members of disciplinary bodies or not.

Following is the text of my letters and the replies received.

RAYMOND WALKER

September 20, 1933.

The Registrar,
The Architects' Registration Council.
re Serial Number 1,641. Dated 21/11/33

SIR,—I should be glad if you will let me know what my position is as a Registered Architect, reference as above, regarding advertising and trading.

So far as I am aware the Registration Act makes no provision for a code of professional conduct, and that as a Registered Architect I may:—

1: Advertise my architectural services publicly.

2: Receive commissions (not disclosed).

3: Carry on any trade or occupation besides architecture.

4: Solicit work by means of paid agents.

Naturally my conduct as an architect is already controlled by the various statutes designed to prevent fraud and misrepresentation that are universally applicable, but as an "unattached" architect, is there anything to prevent me carrying on any or all of the aforementioned activities in the 1931 Act? And if so, what method is laid down for restricting my activities?

I understand that the Council is empowered to take action against a registered architect committing acts "disgraceful" for him in his capacity as an architect. What definition can here be placed on the word disgraceful?

I remain,
Yours faithfully,
RAYMOND WALKER

September 21, 1933.

Raymond Walker, Esq.

SIR,—The question you raise in your letter of September 20 is one on which I must consult the Council, and when I have had an opportunity of doing so, I will communicate with you thereon.

Yours faithfully,
C. MCARTHUR BUTLER,
Registrar, The Architects' Registration Council

September 22, 1933.

The Registrar,
The Architects' Registration Council.

SIR,—I am in receipt of your letter of September 21, for which I thank you, and note that you are laying the subject matter of my letter to you of September 20 before your Council. I presume you will do this at the next Council meeting, as your Council will naturally be desirous of giving their ruling on the several points I have raised without delay.

I am very grateful for the trouble you are taking in this matter, but I am sure you will agree that it is one of considerable importance to myself, that I may be properly aware of the conditions governing my activities as a registered architect.

I remain,
Yours faithfully,
RAYMOND WALKER

October 4, 1933.

The Registrar,
The Architects' Registration Council.

SIR,—As I understand that the Registration Council met on September 25 last, and that it presented an opportunity for you to consult your Council on the subject matter of my letter to you of September 20, I am much surprised that I have not received further information.

I imagine from certain verbal information that your Council meets again in the early part of December next; if I am correct in assuming that there is no meeting before that date, am I to understand that my communication is to be left unanswered (except for formal acknowledgment) until after December 12?

In the meantime, while my letter remains unanswered, I read in a publication called THE ARCHITECTS' JOURNAL that "the question of a Code of Professional Conduct . . . is a responsibility of the (your) Council and a duty of its Discipline Committee." So far I am not aware that the scope of a statutory body exceeds the limitations defined in the Act that gave it birth.

Moreover, it may be fairly assumed in law that such a body as was set up under the Architects' Registration Act must be in a position to give such information as I require within reasonable time, unless it is to be considered as insufficiently constituted to operate the Act to the best interests of those under its control and of the public generally.

Not having received any intimation of any Code of Professional Conduct, nor any suggestion that such a code may interfere with such activity described in the second paragraph of my letter of September 20, I can only assume that as a registered architect I am perfectly in order to advertise, receive undisclosed commissions, carry on other trades than architecture, and solicit work through paid agents.

When your Council can find time to give a ruling on these matters, I shall be deeply interested; in the meantime I object to the publication of "views," while the registered architect is kept without information that should have been available when the Act came into operation.

Please note that I am no longer governed by any professional code save that which may be required to maintain my name on the Statutory Register, and that it therefore becomes imperative that I receive a statement on any such code which can exist under the Act to which I am expected to conform.

I gather that it is the intention of your Council, in formulating a Code of Conduct, to consider the interests of the registered person *per se*, but I am not yet aware of the proper course for an "unattached" architect to apply to his representative on the Council. Perhaps you would be good enough to inform me.

I remain,
Yours faithfully,
RAYMOND WALKER

October 6, 1933.

Raymond Walker, Esq.

SIR,—In reply to your letter of October 4, I have been away through illness for some days and I am sure, under these circumstances, you will make allowance for the fact that some of my correspondence has got a little in arrear.

With further reference to your letter of September 20, I beg to say that the Council has referred your enquiry to the appropriate Committee for consideration and report, and I will see that your letter of October 4 also comes before them in due course.

Yours faithfully,
C. MCARTHUR BUTLER,
Registrar, The Architects' Registration Council

October 9 1933.

The Registrar,
The Architects' Registration Council.

SIR,—I am sorry to hear that you have been away through illness; I must naturally content myself with your letter of October 6 under the circumstances.

However, since writing to you last, I have received a circular, towards the end of which certain figures are quoted. Am I to understand that for the payment of 6s. 8d. per annum the A.R.C.U.K. can afford me all the possible benefits that any other architectural body could offer?

Moreover, it goes on to state that your Council could not give support to another body which proposes to do the work of the Council without possessing its powers. . . Please answer me by return of post and state on behalf of your Council what this all really means.

Instead of receiving answers to the questions that concern my livelihood and integrity, I receive a lot of verbiage asking me not to consider joining a body called the Institute of Registered Architects.

I begin to think that this other body is somewhat necessary. Unless I get some definite information by the end of this week, I shall take steps to take my enquiries to a quarter where I shall at least receive an answer. Moreover, I shall invite the Press to watch an unfortunate "registered" architect in seach of information.

Yours faithfully,
RAYMOND WALKER

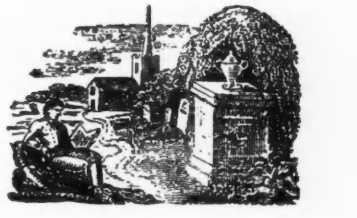
October 12, 1933.

Raymond Walker, Esq.

SIR,—In reply to your letter of October 9, the circular to which you refer emanated from the chairman of the Council, who informs me that he has nothing to add to the information contained therein.

No doubt if you decide to adopt the procedure indicated in the last paragraph of your letter you will make it known that the points which you have raised have been referred by the Council to a committee for consideration and report.

Yours faithfully,
C. MCARTHUR BUTLER,
Registrar, The Architects' Registration Council



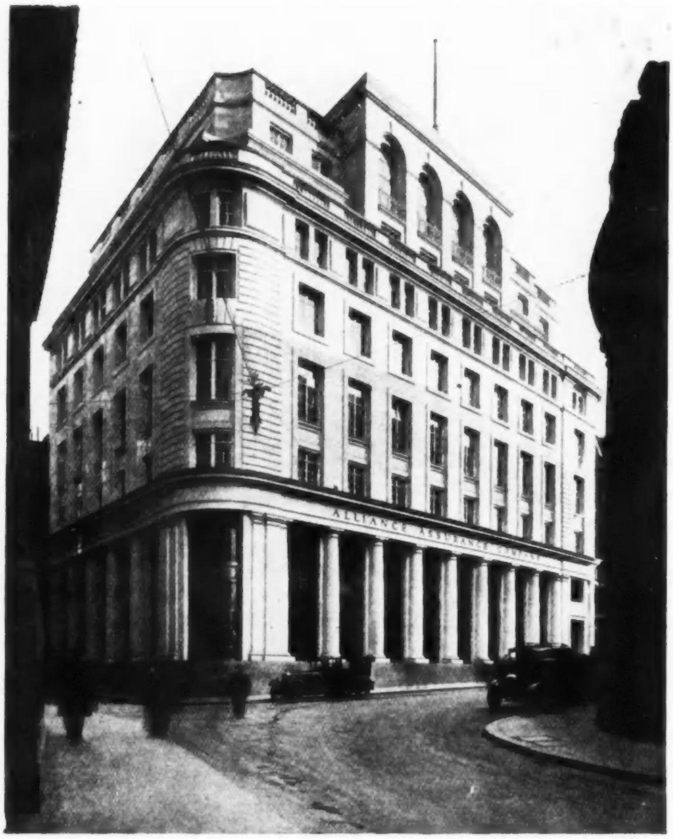
NEW MUNICIPAL BUILDINGS AT PETERBOROUGH

The new £200,000 municipal buildings at Peterborough, designed by Mr. E. Berry Webber, F.R.I.B.A., were officially opened on Thursday last. The new buildings form part of the £500,000 street improvement scheme in the centre of the city.

ST. MARY'S HOSPITAL, PADDINGTON

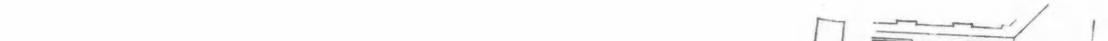
We understand that the King, accompanied by the Queen, is officially to open, on December 12, the new medical school of St. Mary's Hospital, Paddington, W.

ALLIANCE ASSURANCE COMPANY'S


ALLIANCE ASSURANCE COMPANY

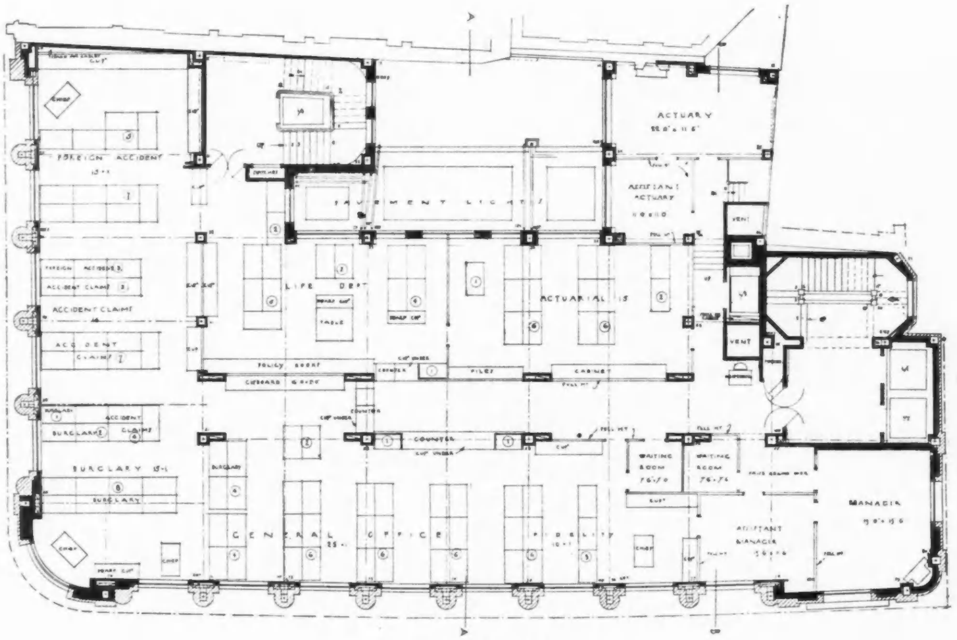
MESSRS. JOSEPH
AND
MEWÈS AND DAVIS,
JOINT ARCHITECTS

This building is situated at the corner of Throgmorton St. and Bartholomew Lane, in the City of London. It is a steel framed building, faced with Portland stone, with bronze doors and ground floor windows, and steel windows above. Photographs of the interior are given on pages 574-575.

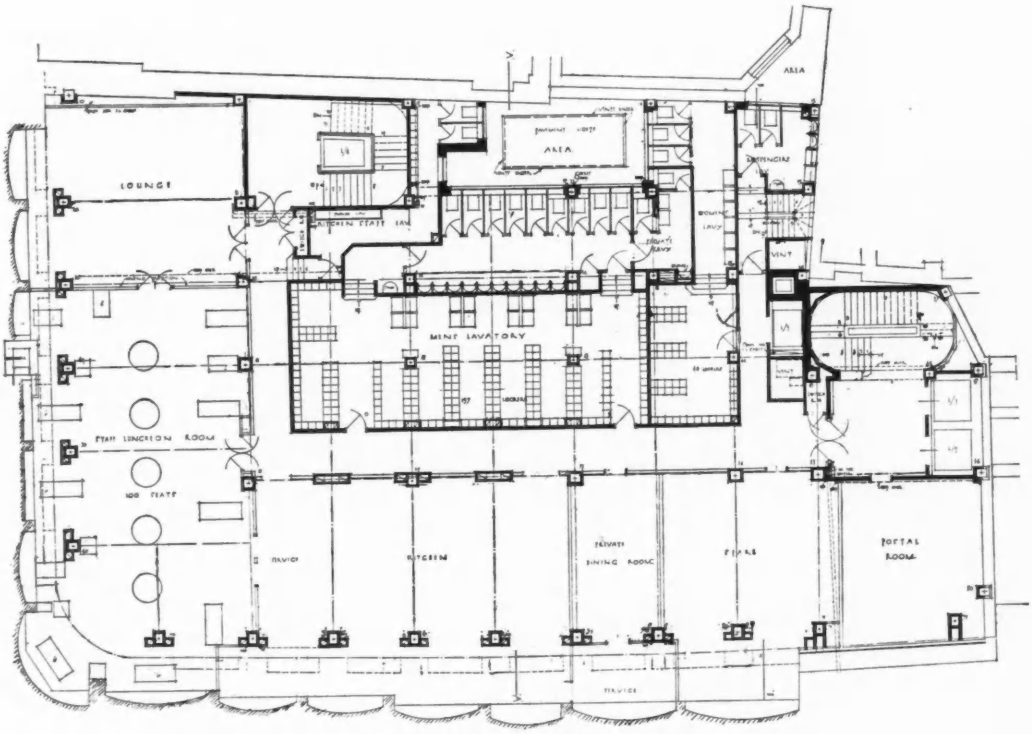

AREA
AREA
LIFE INSPECTORS
LIFE INSPECTORS
LIFE AGENCY & SUPERINTENDING CLERK
INSPECTOR
MEZZANINE
CASH ANNUITIES NEW BUSINESS
WAITING ROOM
PUBLIC SPACE
TOWN
WAITING ROOM 73·0·0
FIRE MANAGER 79·0·0
MR. GRIFFITS
THROGMORTON ST.
BARTHOLOMEW LANE
GATE COURT

GROUND FLOOR PLAN

HEAD OFFICE, BARTHOLOMEW LANE, E.C.


ACTUARY
ASSISTANT ACTUARY
VENT
FOREIGN ACCIDENT
PAVEMENT LIGHTS
LIFE DEPT
ACTUARIAL
FOREIGN ACCIDENTS
ACCIDENT CLAIMS
ACCIDENT CLAIMS
ACCIDENT CLAIMS
POLICY BOOKS
CUPBOARD GUIDE
FILES
CABINET
COUNTER
BURGLARY
ACCIDENT
CLAIMS
BURGLARY
BURGLARY
WAITING ROOM
WAITING ROOM
MANAGER
ASSISTANT MANAGER
GENERAL OFFICE
FIDELITY
CHEF

FIRST FLOOR PLAN

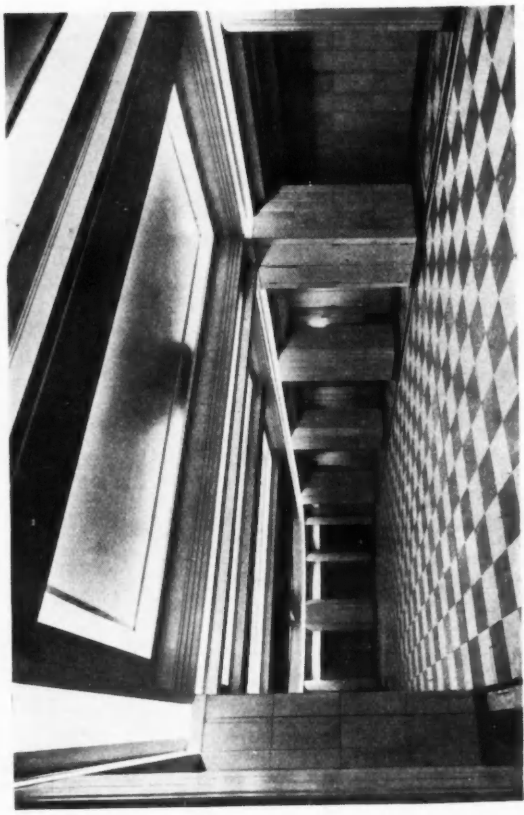

AREA
AREA
LOUNGE
KITCHEN STAFF LAV
PRIVATE LAVY
WOMENS LAVY
VENT
MENS LAVATORY
LOCKERS
STAFF LUNCHEON ROOM
100 SEATS
SERVICE
KITCHEN
PRIVATE DINING ROOM
STAIRS
POSTAL ROOM
SERVICE

LOWER GROUND FLOOR PLAN

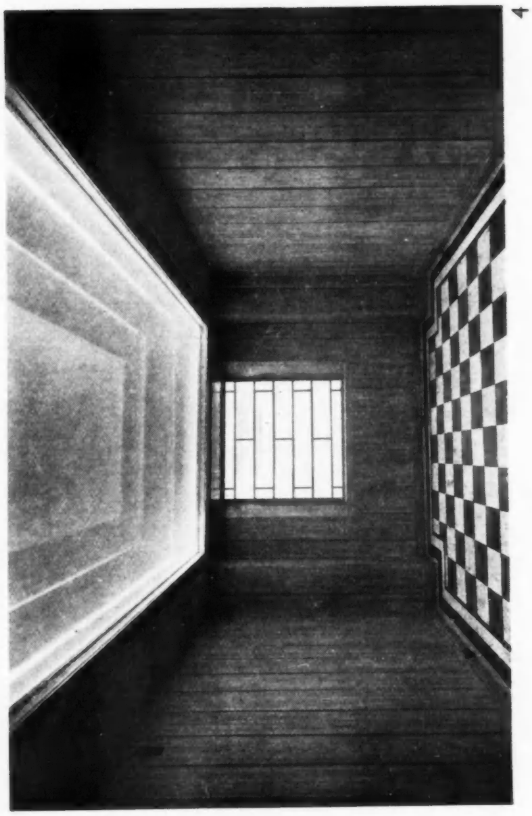
ALLIANCE ASSURANCE COMPANY'S HEAD OFFICE, E.C.

1

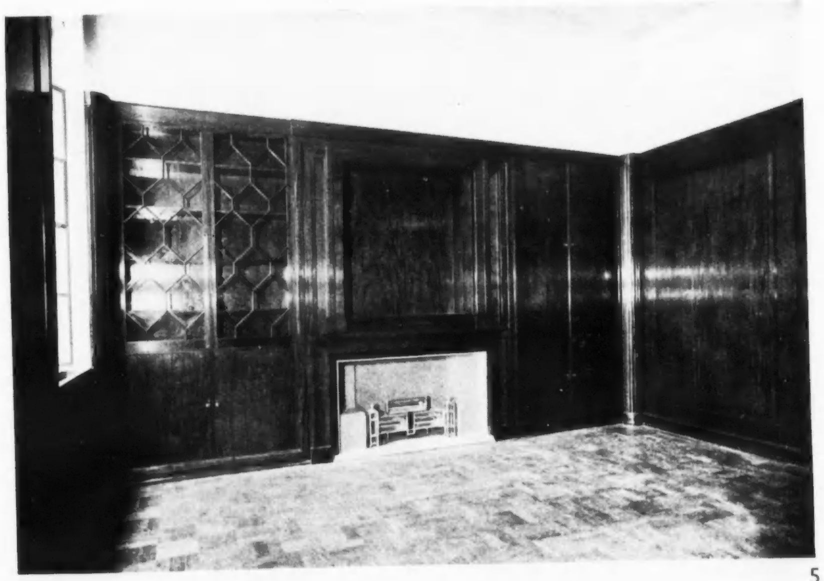
2



3



4



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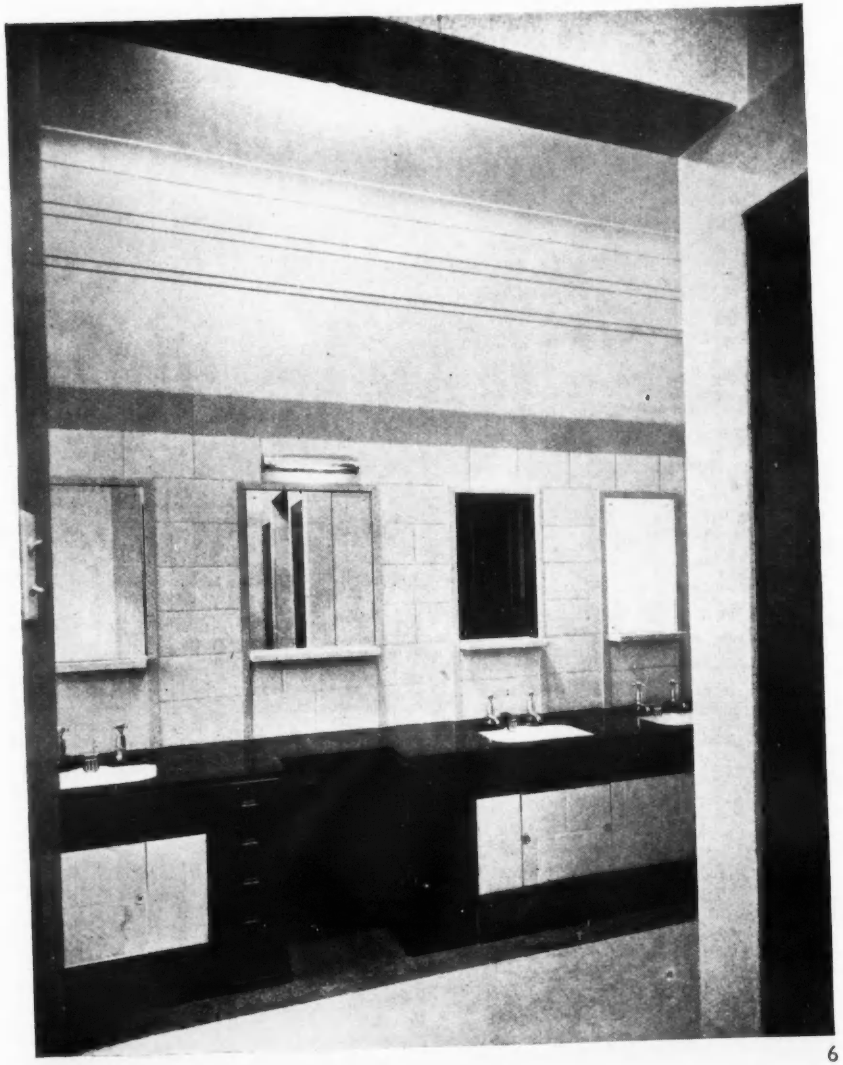


6

Some details of the interior. 1 : The public space on the ground floor. The walls, piers, etc., are of polished Portland stone, as is the counter which has a teak top. The furniture will be of teak. 2 : The staircase landing at second floor level. The walls are of polished Portland stone and the stair treads, landings, etc., in terrazzo, the latter in squares of dark and light grey. The handrail is of bronze with wrought iron balusters. 3 : The staff dining room. The walls are in yellow faience and the doors in ebonized mahogany. 4 : A private dining room. The walls are of plaster painted to represent pine boards. The room has a rubber floor, a mahogany door painted to resemble pine and a false window lit from behind. 5 : The general manager's office. The panelling is mahogany and the floor of teak blocks. 6 : The directors' lavatory. The walls are of artificial marble, coloured cream and greyish green. The surround to the basins is in black marble, and the doors, cupboards, etc., in ebonized mahogany.

MESSRS. JOSEPH AND MEWÈS AND DAVIS, JOINT ARCHITECTS

PERIODICALS

OCTOBER ANTHOLOGY

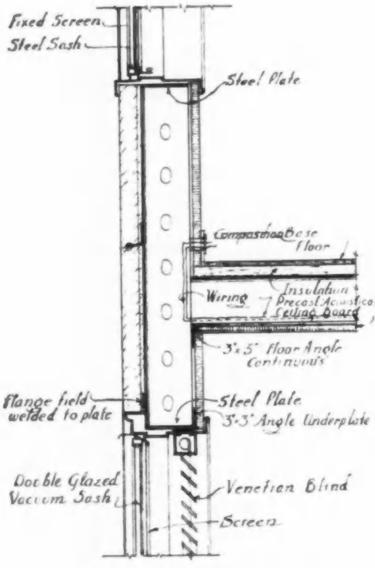
This is the first of a series of reviews of Continental and American architectural periodicals. At the beginning of each month we propose to publish, under the heading "Periodicals," a summary and commentary on foreign publications for the preceding four weeks.

AMERICA

The Architectural Record.
(Monthly 50 cents.)

CELLULAR steel-unit house; H. T. Lindeberg, architect. The application of module principle to house design, and construction out of standardized units. Type plans and constructional details.

Elevator features in the Rockefeller Centre, New York City: scheduling the elevators: timing devices; cross-over floors; elevator telephones; photo-electric cell safety appliances; ventilation of elevator cabs; miscellaneous devices.



Unit type house construction.
[THE ARCHITECTURAL RECORD]

Building trends and outlook: material prices, building wage rates and building costs compared graphically.

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BELGIUM

Architecture et Urbanisme.
(Monthly.)

No. 7. 1933. Walter Gropius, by Gaston A. L. Brunfaut. Illustrated by photographs of Gropius's work at Dessau and Berlin, and his project for a state theatre at Kharkov, U.S.S.R.

Is Modern Architecture a Necessity; A lecture given at the Ravenstein, by the architect, A. C. Duesberg, C.S.A.B., on March 21, 1933. It was part of the C.S.A.B. monthly lectures, under the patronage of the Minister, Jules Destrée, and organized by the Central Society of Architecture of Belgium and the Belgian Society of Town Planners and Modern Architects.

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FINLAND

Domus.

An artist's house, described by N. G. Hahl.

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FRANCE

L'Architecture.
(Monthly 6 fcs.)

The Present Restrictions to the Height of Towers, by Henry Lossier. The Architecture of Museums; technical article by Louis Hautcoeur.

La Technique des Travaux.
(Monthly 10 fcs.)

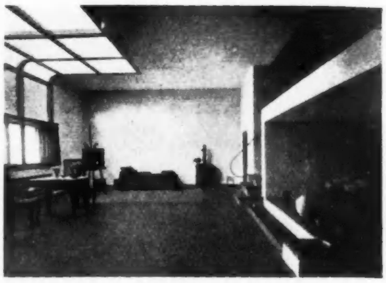
Unilever House, Rotterdam; H. F. Mertens, architect. The new railway station, Bône, Algeria; Choupaut and Truchot, architects. Construction of concrete grain silos (80,000 tons) by moving forms at Bahia Blanca, Argentine; Louis Gain, engineer. Construction of reinforced concrete dam, Owyhee, U.S.A.; Skerrett and Gain, engineers.

L'Architecture d'Aujourd'hui.

No. 5. 1933. Modern Architecture in Czecho-Slovakia. 45 pages of photographs of work by architects: Fuchs, Goçar, Honzik, Havlicek, Bens, Kriz, Hannauer, Gillar, Urban, Tyl, Machon, Linhart, and Kysela. Articles: Mobility, by Karel Honzik. Prague: Historical survey by Jean Sokol. The plan of Prague by Max Urban. The Problem of the Habitation Minimum by Karel Teige.

L'Architecture Vivante.
(Quarterly. Summer, 1933.)

Architecture in U.S.S.R. (Third part). Theatres and concert halls. Selected designs submitted in the international competition for a state theatre at Kharkov to seat 4,000 persons.



Artist's living-studio.
[DOMUS]

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GERMANY

Moderne Bauformen.
(Monthly 3 R.M.).

House on Rose Hill, Budapest, by Ludwig Kozma; work of an architect with large funds at his disposal. Twenty-eight pages of photographs, plans and working drawings. Country house near Vienna, by Fischel and Siller. Concert Hall, Helsingborg, by Sven Markelius, description, plans and photographs.

Necessities of Everyday Life (continued): tables, and working drawings for wardrobes and kitchen fittings.

Deutsche Bauzeitung.
(Weekly.)

No. 41. New gas appliances for domestic purposes (concluded from Part 40). Decentralized hot water supply through Gas. Waterway Station, Mühlheim-Ruhr, by Chief Building Councillor Brocke, Mühlheim. Port Railway Station at Friedrichshafen, Lake Constance.

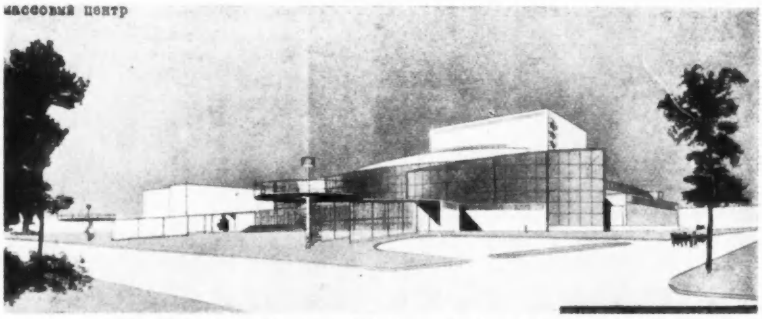
No. 42. Anti-aircraft building methods; illustrated article by Dipl.Eng. Helgen. Building Foundations by Government Architect Przygode, Berlin. Buildings of the Hunnewell Mines in the Alps, by Government Architect Schuhmacher, Basle. Almshouses, Buckow, Maerkische Switzerland. Architect Bachmann, Berlin.

No. 43. Development of Protestant church design.

Bauwelt.
(Weekly.)

Oct 5.—Tobacco factory, Linz. Peter Behrens and Alexander Popp, architects.

Oct 12.—The Reservoir Dam at Ottmachau, Upper Silesia, by Dipl.Eng. Friedrich Feickert, Berlin. Wood Windows or Steel Windows? by The Central Union of Master Building Joiners of Berlin.



Project for a State Theatre at Kharkov. Walter Gropius, architect.
[ARCHITECTURE ET URBANISME]

Houses and flats; house designed by Erich Richter, Berlin, for himself; a one-room flat in Vienna by John Groag; two wooden houses, one by Georg Bremmer, Berlin, the other by R. B. Wills, Brooklyn, Mass.

Oct 19.—Four schools: Girl's College, Athens, by Andreas Kriësis; Secondary school, Vienna, by Wilhelm Baumgarten and Josef Hofhauer; Secondary school, Berlin, by Otto Risse and "Volksschule," Hilversum, by W. M. Dudok.

Oct. 26.—Reactionary Housing, Stuttgart; mainly wood construction, with details of constructional methods and photographs of work in progress and completed.

Zeutralblatt der Bauverwaltung.

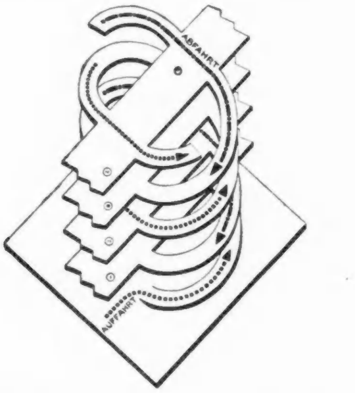
(Weekly.)

Oct 18.—Technical description, detail drawings and photographs of the new buildings at Breslau aerodrome.

Monatshefte für Baukunst.

(Monthly 1.90 R.M.)

The Suburban Residential Area of Falkensee, Falkenberg, Blankenfelde, near Berlin; architect: Josef Bischof. Suburban Residential Areas of Eberswalde, Dusseldorf and Gleiwitz. Single-storey brick-faced dwelling house in Lankwitz; architects: Egon Eeiermann and Fritz Jaenecke, Berlin. The Architecture of the Prehistoric Civilization of the Andes in South America; photographic details of masonry. By Kurt Severin. The Eastman Dental Clinic in Rome. The Milan Law Courts (Fascist architecture); architect: Marcello Piacentini, Rome. A garage for commercial vehicles in Paris; architect: Jean Demaret. Log house building, with diagrams showing timber wall and roof construction and photographs of completed wood houses, by Herbert Noth, Berlin. 21 illustrations. The New Reception Building of the Port Railway Station in Friedrichshafen, Lake Constance. Wall Coverings. II. Mosaics. Railway Station in Cincinnati; architects: Alfred Fellheimer and Steward Wagner, New York; short note, three photographs and a plan. Purpose and Problems of Land-planning, by Friedrich Paulsen. Anti-aircraft Protection for Municipal Buildings. Suggestions for an Ideal "Anti-aircraft" Town, by Hans Schossberger, Berlin.



Ramp system in a garage for commercial vehicles, Paris.

[MONATSHEFTE FUR BAUKUNST]

Der Baumeister

(Monthly. 3 R.M.)

No. 9, 1933. Issue devoted to the recent work of Bräuning, Leu and Dürig, Basle: villas at Basle, nonconformist church, restaurant, shops, night club; with supplement containing detail drawings of the aforementioned work.

Innen Dekoration

(Monthly.)

No. 9, 1933. The Triennal Exhibition, Milan: experimental week-end houses, by Griffini, Faludi and Bottoni; several Photographs of dwelling-house interiors by Aloisio, Chessa, Cuzzi, Levi-Montalcini and Pagano.

Die Form

(Monthly. 1.25 R.M.)

No. 9, 1933. German housing under the new Reich: illustrated article by W. Wendland. State Banks and Government Buildings: illustrated article by J. Umlauf.

HUNGARY

Tér Es Forma.

(Monthly.)

Special number devoted to sports stadiums, grand stands and swimming pools, mainly reinforced concrete; construction, seating, circulation, etc. Illustrated by plans, sections and photographs of models and completed work.

ITALY

Rassegna Di Architettura.

(Monthly.)

Fourth Congress of International Congresses for Modern Architecture. C.I.A.M., Marseilles-Athens, 1933. Illustrated commentary. Athens, 1933: modern buildings in Athens, principally schools, reviewed by Piero Bottoni.

Architettura.

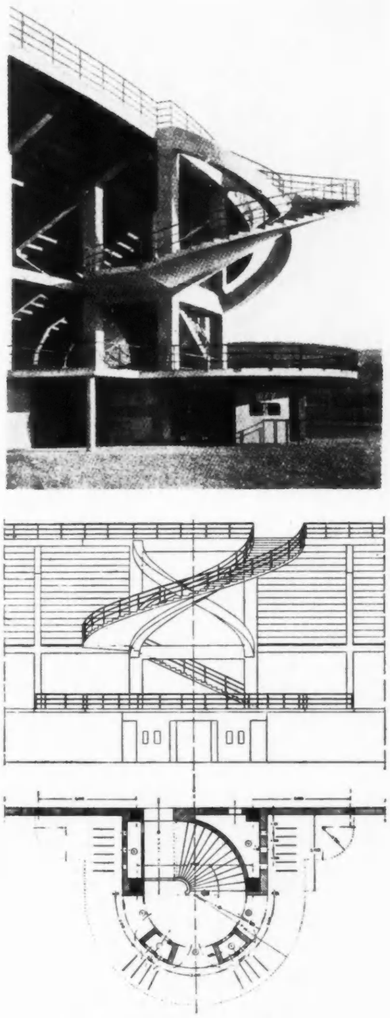
(Monthly.)

The 15th Sample Fair of Padua, architect, Giuseppe Tombola. The new building of the Physical Institute of the Berlin Polytechnic, by Fritz Schirmer, with an isometric projection showing the arrangements of ducts of the air conditioning plant from the basement to the lecture theatre. The "Foro Mussolini," Milan, by Giuseppe de Finetti and Ferdinando Reggiori. The new town of Littoria in the Agro Pontino; architect, Oriolo Frezzotti. Town Planning: the official plan of Castel Fusano; architect, Concezio Petrucci; article by Mario Paniconi.

Ediliza Moderna

(Monthly.)

No. 9, 1933. The economic problem of the modern house; illustrated article by C. Albertini. Modern Naval Architecture; illustrations. Insulation of reinforced concrete floors; article by Pasquale Ameri. Economy in construction (frame buildings); article by Francesco Weisz, engineer.



The Municipal Stadium, Florence. P. L. Nervi, architect.

[TER ES FORMA]

SPAIN

Arquitectura

(Bi-monthly.)

No. 5, 1933. The restoration of the ancient monuments of Spain, by L. Torres Balbás. News Cinema, Madrid, by S. Ulargui; seating and lighting details. Theatre in a Students' Hostel, by Arniches and Dominguez; technical article, working drawings and steelwork details.

Viviendas

(Fortnightly 2 pesetas.)

No. 15, 1933. Housing colonies by Luckhardt and Anker, Berlin. Interior decoration of a house in Vienna by Fritz

Gross ; a flat in Florence, by Gherardo Bosio ; a flat in Paris, by Dominique : principally photographs.

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SWEDEN

Boet.
(Monthly 1.50 kr.)

Modern Italian architecture at the Milan Triennial Exhibition : lakeside and seaside summer villas constructed in new materials, by architects Griffini, Faludi and Bottoni. Photographs of exteriors and interiors : no constructional details.

Modern Middle-class Furniture ; article by Dr. Max Osborn, Berlin. Illustrated by photographs of interiors by K. Bertsch, Bruno Paul and Prof. J. Hillerbrand.

Byggmastaren.
(Monthly.)

Bank branch offices, their planning and arrangement. Branch office for Swedish Commercial Bank. Furniture in new office building, Stockholm.

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SWITZERLAND

Werk
(Monthly Fr. 3.60)

Skycraper P.S.F.S. in Philadelphia, by Howe & Lescaze.

American Buildings : illustrated article by Albert Frey on utilitarian architecture.

The Sample Fair, Padua. Architect, Giuseppe Tombola. [ARCHITETTURA]

Cambridge Architectural Society

The following lectures have been arranged by the Cambridge University Architectural Society :

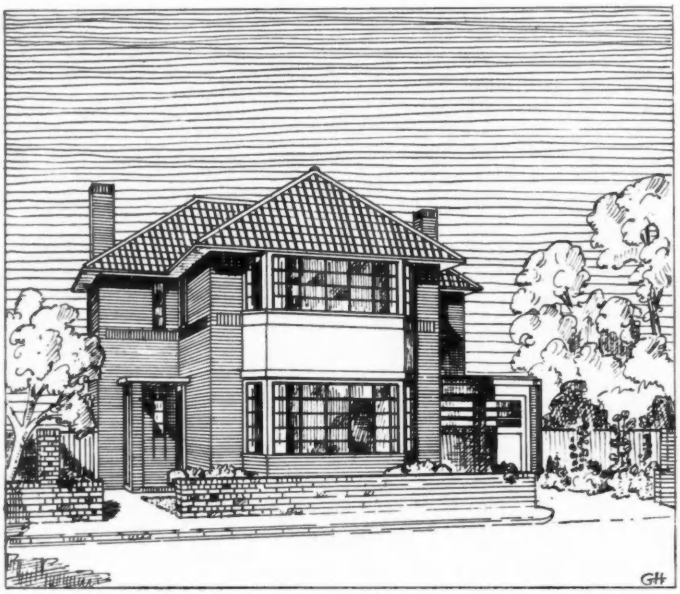
November 7 : "Swimming Baths, Their Materials and Finish," by J. K. Winser ; November 14 : "The Warming of Modern Buildings," by Rendell Davies. November 21 : "Limes, Plasters, Cements and Sands," by J. B. Johnston ; November 28 : "Industrial Patronage of Architecture in the Future," by John Gloag.

The meetings will be held in the Mill Lane Lecture Rooms, Cambridge, at 8.15 p.m.

An Architect's Will

Mr. James Parish, F.R.I.B.A., of Leeds, a partner in the firm of Kitson, Parish, Ledgard and Pyman, left, "so far as can be ascertained," £19,084 (net personalty £17,890).

A. A. COMPETITION FOR



Perspective of the winning design in Group I, by Geddes Hyslop.

THE COMPETITION REVIEWED

[BY OUR COMPETITION CORRESPONDENT]

WHEN the Architectural Association's competition for the design of small villa property was announced some three months ago, I wrote in this JOURNAL a criticism of the principles on which the competition was based ; expressing my doubt both as to the likelihood of any useful results from a competition with such strangely restrictive conditions, and (more emphatically) as to the wisdom of holding such a competition at all.

An attempt, however well-intentioned, to substitute an architect's good taste for a speculative builder's vulgarities in the design of individual suburban houses is no contribution to the greatly needed improvement in suburban design, when what is needed is wholesale reorganization of suburban expansion on a planned basis. It is like attempting to deal with the menace of increasing road accidents by providing more comfortable ambulances.

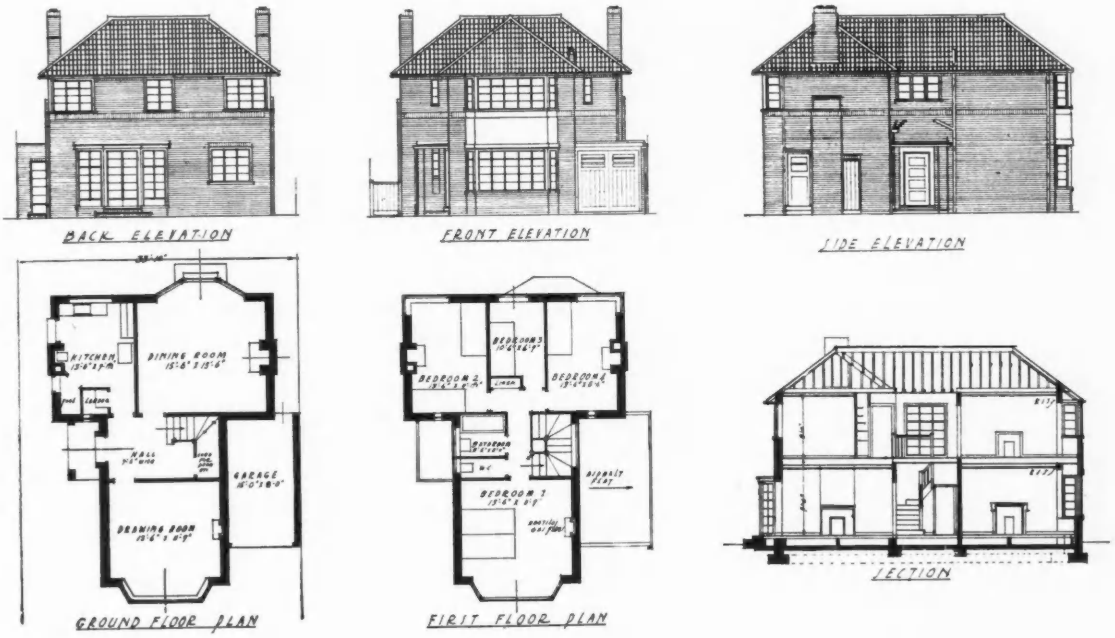
Planning on a large scale with adequate foresight and in co-ordinated units is the only way of effectively facing the problem ; and it rests with the architect to foster the first advances towards this ideal, and to refuse to accept as a basis of design a principle that itself stands in the way of a satisfactory solution. Unfortunately, however, as I said in my previous review of this competition :

"The A.A. in its pedagogic way still apparently regards a 'design for a small house' as an isolated problem to be solved on paper without regard to any of the sociological, financial or even the town-planning questions involved, and it is from this aspect that the shortcomings of the competition are most apparent.

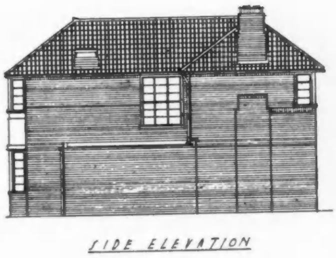
"The promoters are giving architectural endorsement to a definitely retrograde step in suburban planning. For years we have been complaining plaintively of the deplorable way our suburbs are developed, but without doing anything useful about it ; and now the architect, as represented by a responsible body (the Architectural Association) at last makes a move. What does he suggest ? He is prepared, the A.A. announces, to quote from the conditions of this competition, to *recognize the builder's problem and endeavour to deal with it in an architectural way to produce houses which will be acceptable to the buying public and readily saleable.* And how ? By encouraging the speculative builder still to develop his estates in piecemeal fashion, and to put up the same uneconomic houses with bright and simple improvements suggested by the architect.

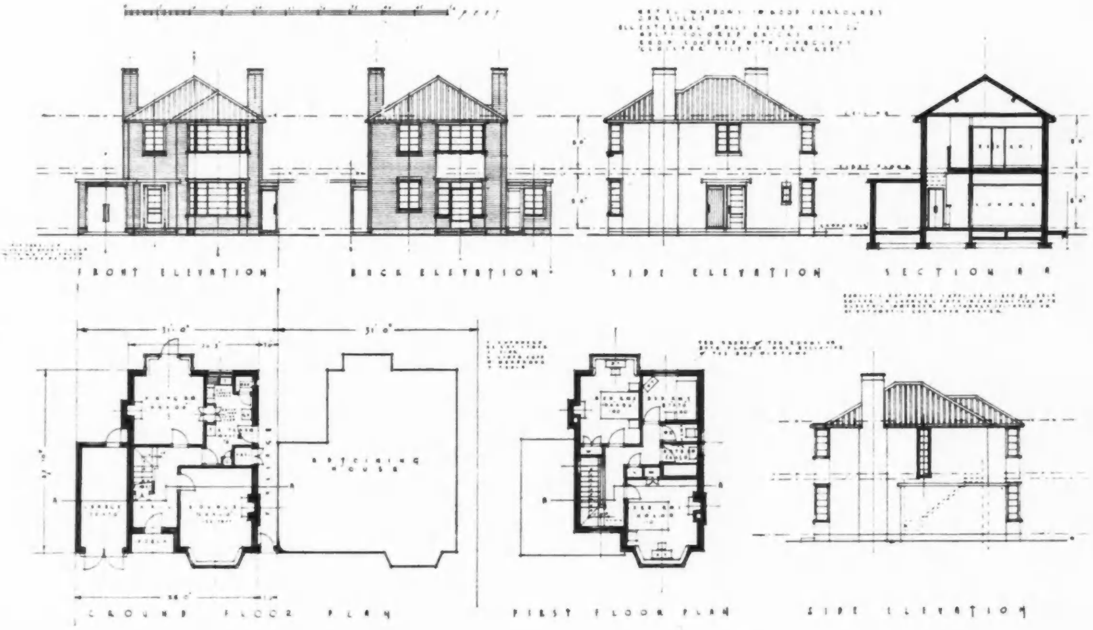
"It is most misleading to call a house 'architect-designed' when an architect has drawn the plans and elevations with no opportunity of taking into account the orientation and topography of the site, the character of the neighbouring houses or the economic basis on which the estate is to be organized—in fact, when the house is bound to have most of the very failings for which speculative builders' houses are generally condemned ; yet the promoters of this competition proudly state that, *at least one house of each winning design will*

DESIGN OF SMALL VILLA PROPERTY


BACK ELEVATION
FRONT ELEVATION
SIDE ELEVATION
KITCHEN 13'6" x 9'11"
DINING ROOM 15'6" x 15'6"
HALL 7'6" wide
GARAGE 15'0" x 8'0"
DRAWING ROOM 13'6" x 8'9"
GROUND FLOOR PLAN
BEDROOM 2
BEDROOM 3 10'6" x 6'9"
BEDROOM 4 13'6" x 8'6"
LINEN
BATHROOM
W.C.
BEDROOM 1 13'6" x 8'9"
ASPHALT FLAT
FIRST FLOOR PLAN
SECTION

Above and right: plans, section and elevations of the design placed first in Group I, by Geddes Hyslop. This design will be utilized for houses to be erected on an estate at Mill Hill. The selling price will be £1,175. Below: design placed first in Group III, by Philip B. Herbert. Selling price £935.


SIDE ELEVATION


FEET
FRONT ELEVATION
BACK ELEVATION
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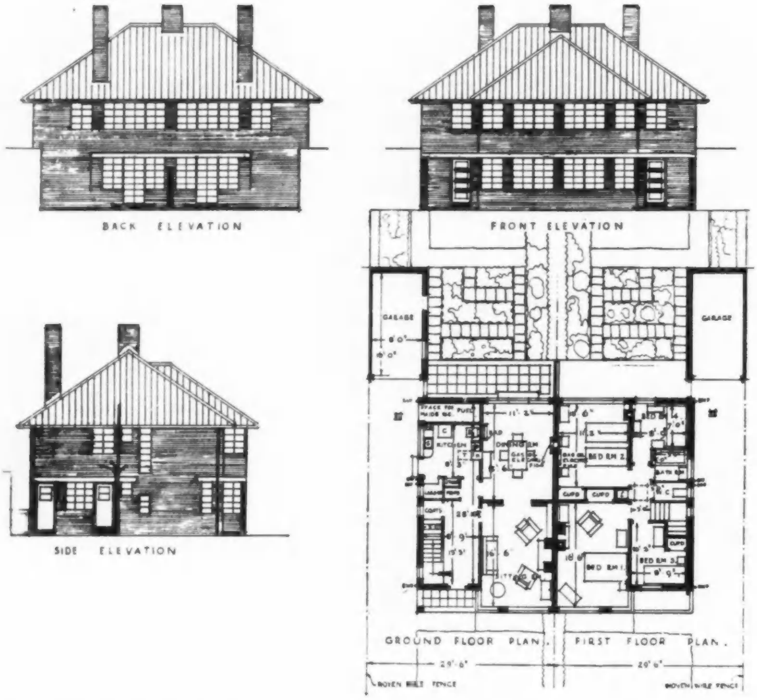
SECTION A A
31' 0"
ADJOINING HOUSE
GROUND FLOOR PLAN
FIRST FLOOR PLAN
SIDE ELEVATION



Design commended in Group I, by Miss Frances Barker. Four pairs to be erected subject to a small revision of the service planning. Selling price £1,075

be built on the . . . estate, and *the remaining houses will be designed by architects so that the whole scheme will be a demonstration of architect-designed houses.*"

With this short-sighted attitude in mind as well as the promoters' detailed restrictions (banning, for instance, flat roofs and insisting on traditional materials) who could be surprised that, now the results of the competition are published, the designs have indeed the very failings for which speculative builders' houses are generally condemned. This was inevitable ; but it is not, of course, the fault of the competitors.

That the A.A. invented this competition with all the most altruistic intentions I have no doubt. They would justify it, I imagine, by saying that it does not do to aim too high ; that a small advance in practice is preferable to a larger declaration of theory. It is important, however, that the small advance should not be along a path that we already know to be leading in the wrong direction. Instead of designs for isolated houses to be erected on an existing estate of which competitors have no description, a more sensible subject for competition would have been the lay-out of the same estate in a modern comprehensive fashion ; to give the speculative builder a lead in the kind of suburban planning in which he might expect architectural encouragement, instead of giving an appearance of architectural approval (as this competition threatens to do) to haphazard building in the present manner.

About the individual designs there is little that can be said. Some are less pretentious than others. Some undoubtedly show improvements in detail on the type plans that were provided, and refinements in elevation on the usual speculative villa. The winning and commended designs are as simple and straightforward as conditions allowed, and show some ingenious variations in plan ; though often, unfortunately, for the sake of symmetry rather than convenience ; but even these designs are hard to visualize as anything but restless when repeated in a row, when their hipped roofs will create a new centre on each house in turn. Taken as a whole, in fact (despite the absence of the more obvious forms of vulgarity), the designs appear little different from the work of the more respectable speculative builders.

The promoters themselves have expressed disappointment at the results of this competition, but it is clear from the causes to which they attribute the disappointing results, that they still do not realize that its failure was inherent in its conception.

They have said, I understand, that it appears from the designs sent in that the younger architect is not interested in this type of building, and that he does not understand the speculator's point of view. The younger architect is intensely interested in the problem of suburban housing, speculative or otherwise, and in the need of planning and control ; the fact that so few of the younger architects were interested in this competition only indicates, let us hope, that the majority realized that planning and control could not be reached by the methods the A.A. suggested. The speculator's point of view the younger architect understands only too well.

LAW REPORT

RIGHT TO DEMOLISH SHEDS

Guidici v. *Guildford Corporation.—Court of Appeal. Before Lord Hewart (Lord Chief Justice), Lord Wright and Lord Justice Slesser.*

THIS was an appeal by the Guildford Corporation against a judgment of a King's Bench Divisional Court in March last allowing an appeal by Mr. Angelo del Guidici from a decision of his honour Judge Hogg at the Guildford County Court.

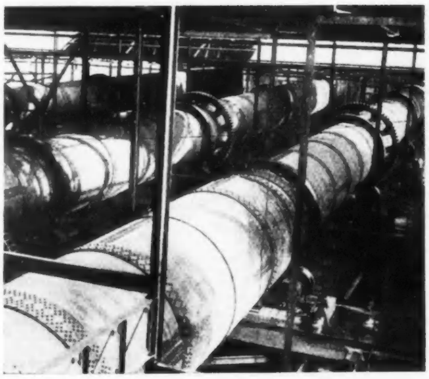
Mr. Guidici was the tenant of a house in Guildford of which the Corporation were the landlords by reversion. He let the house in parts, appointing Mr. F. Haines as a sub-tenant and collector of the rents. In 1928 Mr. Haines gave the Corporation permission to demolish two sheds on the premises and Mr. Guidici made no objection. In February, 1932, the Corporation were allowed to pull down two more sheds and the Corporation, when remonstrated with, argued that Mr. Guidici's acquiescence when the first sheds were demolished amounted to his holding out Haines as his agent. Mr. Guidici's action for trespass against the Corporation was dismissed by the County Court judge, but the Divisional Court set that judgment aside, holding that Haines had no authority as agent of Mr. Guidici to give permission to demolish the sheds ; indeed, Haines did not appear to have given permission, for the evidence seemed to indicate that the Corporation said they were going to do it.

The present appeal was against that decision.

Mr. Gilbert Paull, for the Corporation, submitted that there was ample evidence of a tacit agreement between Mr. Guidici and Mr. Haines, that the latter should be the former's agent.

The Court dismissed the appeal and affirmed the decision of the Divisional Court with costs.

Lord Hewart said he did not think it necessary to review the evidence. The Court were of opinion that there should be no new trial as the Divisional Court ordered, but judgment should be entered for Mr. Guidici with such damages as should be agreed upon or assessed by the County Court judge.



TRADE NOTES

[*BY F. R. S. YORKE, A. R. I. B. A.*]

Cement Manufacture

THE second unit of plant of the Ketton Portland Cement Co., Ltd., was set in motion on Friday, October 20, by Sir Arthur Balfour, who formally lit the second rotary kiln which is to increase the annual production of the company from 75,000 to 150,000 tons.

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The cement is manufactured from clay and limestone found in the company's quarries situated only a few hundred yards from the manufacturing plant. During the process of manufacture the clay and limestone are ground and mixed in the proportion 1 to 3 approximately.

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The upper burden of clay is excavated by a large steam navvy, and as the clay is removed the underlying limestone becomes accessible. Until sufficient clay has been removed the limestone will be obtained from large dumps which have accumulated in the last 800 years whilst Ketton freestone, which lies 15 feet below the limestone, has been quarried. The clay is loaded by the navvy into wagons, each holding four cu. yards, and brought to the wash mill, where it is mixed with water and stirred to a slurry which is pumped into an elevated basin. When the basin is full, the slurry is agitated by compressed air. This agitation is continued until the mix is thoroughly uniform, when a sample is analysed so that the proportions of silica, alumina and iron oxide may be checked.

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The Ketton Cement Co. is fortunate in having readily available on its estate a wide range of clays—some high in silica and some high in alumina, as well as iron oxide.

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The limestone is loaded into wagons, each containing about 14 tons, and these are hauled by locomotives to a tipper hoist, by which they are lifted 28 ft. above rail level, and their contents discharged into a steel hopper.

From this hopper the limestone is passed by a feeder at the rate of 150 tons per hour to a large jaw crusher, which reduces the limestone to approximately 6 in. lumps.

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The crusher discharges this material into a swing hammer mill where the limestone is further reduced to fragments not larger than ½ in. The limestone is then raised by the elevator into a silo, having a capacity of about 250 tons.

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The stone is next delivered by feed tables to the grinding mills where it is mixed with a gauged proportion of clay slurry that gravitates into the mills from elevated slurry tanks.

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The limestone from the crusher may bypass the two silos and be carried by belt conveyors into a limestone store, with a capacity of 8,000 tons. From this store the crushed limestone can be returned as required by belt conveyors to the elevator, and so into the two silos. The capacity of this store is such as to enable the works to continue running for a fortnight should inclement weather interfere with the regular supply of stone from the quarry, or in the event of a possible breakdown of the crushing plant.

At Ketton cement works limestone and clay are found together; the upper burden of clay is removed by a steam navvy and the underlying stone becomes accessible.

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The mills are charged with 44 tons of steel grinding bodies and revolve at a speed of 20 revolutions per minute, each being driven by a 650 h.p. electric motor.

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The clay and limestone leave the mill together as a very fine slurry, the solid constituents being as finely divided as in the finished cement. This slurry is pumped into an elevated slurry basin, where it is agitated by compressed air in order to maintain a homogeneous mixture. When this is obtained, a sample is taken for estimation of the percentage of carbonate of lime. Should this percentage be too high, a quantity of slurry having a lower content of carbonate of lime is drawn from another of the elevated basins, and a suitable proportion of slurry from each of the two tanks is combined to give the required mix.

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From the basin the slurry is pumped to a feeding device, so controlled from the firing end of the rotary kilns that it delivers a predetermined amount of slurry to each.

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The slurry from the feeders now passes through one of the kilns, at the lower end of which coal dust, drawn automatically from hoppers, is blown into the kiln where it is ignited and creates heat of about 1,700° C. The kilns are constantly rotating and as the slurry flows down it is dried and ultimately fused. Fusion takes place at about 1,500° C.

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This fused material—clinker—leaves the lower end of the kiln through holes on the periphery and falls into a number of cylindrical tubes, which revolve with the kiln. The tubes contain a network of loose chains which act as baffles for the falling clinker and cause it to cascade. At the same time cold air entering the kiln through the tubes is pre-heated by contact with the clinker and heated chains. An economical exchange of heat is thus effected, the red-hot clinker giving up its heat to the chains which in turn raise the temperature of the entering air assisting the combustion of the pulverized fuel.

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On leaving the kiln the cooled clinker falls on a shaking conveyor and is discharged into elevators, which lift the clinker into hoppers.

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Adjacent to the clinker hoppers are further hoppers containing gypsum. The gypsum and the clinker are mixed and fed into dry grinding mills. This is the final

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The photograph at the head of these notes shows rotary kilns at Bevans works, in which the "clinkering heat" takes place.

process of manufacture, but before the cement is despatched to customers it is stored in silos: the British Standard Specification requires cement to be of a definite strength after three and seven days, and it is therefore necessary to retain the cement for at least a week in order that the required tests may be made.

Glass

There are, I believe, differences of opinion regarding the value and policy of "visits to works"; some architects are inclined towards the belief that on such visits they have lunch, hear a product boosted, and return without having gained any worth-while knowledge; and some manufacturers are inclined to think this is all the architect wants to do, and any expense incurred in entertaining him will in all likelihood be wasted.

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Fortunately, this is not, I imagine, the only attitude; when he visits a works the average practising architect sets out to learn something of the material or product that cannot be readily assimilated from books or sales talks; and the manufacturer, who has probably experienced difficulty and been called upon to exercise tact in telling architects that certain things cannot be made in a certain shape, or size, or by a certain process, is only too willing to encourage the architect to learn enough about his product to enable him to design intelligently in it, and to demonstrate its possibilities and limitations.

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A visit, for instance, to Chance Brothers Glass Works, where the architect can witness the operations of rolling, moulding, blowing and so on, will convince him that a little practical knowledge at least is essential to intelligent design in the material. He will discover, from practical demonstrations, the reason why specially designed objects, ordered three or four at a time, cost very much more than similar objects ordered in hundreds or thousands. When, for instance, a glass pressing is made for any purpose (as a pavement light or glass brick), it is necessary first to make a special mould, which is itself expensive, and the cost of it must be spread proportionately over a quantity of pressings, if it is not to make an apparent difference to the cost of the single article.

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Again, if one requires a special pattern on rolled glass, a new roller must be made, and will cost about £100, or if the design be complicated, even more than this. Similarly, if one were to demand glass in sheets two or three inches wider than the manufacturer's standard, the production of it would involve a complete new machine, as well as new rollers; and if he were to require something longer than the maximum he might involve the erection of a complete new works, because the width of the lehr, or annealing oven, is governed by the present standard length.

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In case it may be thought that the maximum size of sheet was adopted arbitrarily, I might add that a sheet of glass ⅛ in. thick, 100 ins. long and 40 ins. wide, is convenient in weight and size and presents a load and bulk that is the maximum a man may easily handle; besides, a pane of greater length than 100 ins. could not be safely glazed with sheet, except in widths so narrow that they could only be cut with difficulty.

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I think, however, the most important thing the architect learns when manufacturing processes have stimulated in him a sympathy for and understanding of the material, is that there is so much to learn about any product that he cannot possibly know all of it, unless he sets out to be a specialist; and that on any point, other than the most commonplace, expert advice is essential, and the best results are dependent upon the co-operation of the manufacturer.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue.

Battersea Power Station: (pages 556, 563-569). General and sub-contractors *Preliminary Works:* LeGrand, Sutcliffe and Gell, Ltd., J. Mowlem & Co., Ltd., boreholes and trial pits: Tilbury Contracting & Dredging Co., Ltd., dredging contract. *General Foundations and River Works, Cooling Water Culverts and Jetty:* The Foundation Co., Ltd., general foundations and river works, cooling water culverts and jetty; J. Mowlem & Co., Ltd., completion of jetty and water mains: London Power Company (by administration), completion of foundations: Light Steelwork, Ltd., jetty screens: Wm. E. Cary, Ltd., jetty fender springs: Harland and Wolff, steel sluice gates: F. W. Brackett & Co., Ltd., band screens; Wm. Cory and Son, Ltd., barge berth, Thames ballast, coal store excavation; Head, Wrightson & Co., Ltd., C.I. cylinder segments: Robert Potter and Sons, C.I. tunnel segments: Trollope and Colls, Ltd., reinforced concrete conduits: Sheepbridge Coal & Iron Co., Ltd., C.I. pipes for cooling water: British Steel Piling Co., Ltd., steel sheet piling: Ham River Grit Co., Ltd., Thames ballast: J. E. and W. F. Thomas, water mains. *Superstructure:* Sir Wm. Arrol & Co., Ltd., steelwork contract and conveyor steelwork; J. Mowlem & Co., Ltd., main building contract and wagon-tippler house; Accrington Brick and Tile Co., Ltd., Accrington bricks: London Brick Co. and Forders, Ltd., flettons; Midhurst Brick Co., Ltd., Midhurst whites: J. C. Edwards (Ruabon), Ltd., buff facing bricks; Shaws Glazed Brick Co., Ltd., faience work; Art Pavements and Decorations, Ltd., pre-cast terrazzo tiles: Hollis Bros. & Co., Ltd., wood block floors: Estler Bros. Ltd., open-type steel flooring; Henry Hope and Sons, Ltd., steel windows, screens in test tank chamber; W. H. Heywood & Co., Ltd., roof glazing: J. A. King & Co., Ltd., ceiling lights in switch-house passage; Light Steelwork, Ltd., control room ceiling steelwork, damper in auxiliary transformer cubicles; Joseph Wragge & Co., Ltd., control-room ceiling glass; R. E. Pearse & Co., Ltd., assembly-room lay lights; Pilkington Bros., Ltd., Georgian wired glass; John Booth and Sons, glazed partitions to boiler-house conveyors, roller shutters in main doorway; Constructors, Ltd., steel and asbestos partitions; Crittall Manufacturing Co., Ltd., steel partitions and offices in workshop: Cellactite and British Uralite, Ltd., sheeting and boiler-house temporary side; J. and H. Patteson, Ltd., marble facings; The Cement Gun Co., Ltd., gunite lining to bunkers: Haskins, Ltd., roller shutters in main flue and switch house: Bostwick Gate and Shutter Co., Ltd., collapsible gates to transformer cubicles: Morris-Singer Company, main entrance doors: Fredk. Braby & Co., Ltd., ventilators in lantern gables: Wolverhampton Corrugated Iron Co., Ltd., roof ventilators: Benham and Sons Ltd., Heating: Braithwaite & Co., Ltd., dampers to primary chambers: Safety Tread Syndicate, Ltd., mason's treads for staircases: Bayliss, Jones and Bayliss, Ltd., turbine house handrailing: Stic B, Ltd., concrete surfacing paint on chimneys: Macfarlane & Co., Ltd., rainwater goods: Prodorite, Ltd., cement Prodor: George M. Callender & Co., Ltd., Callender's sheeting: Gray's Ferro-Concrete Co., Ltd., ash bunkers and filter tanks: Naylor Bros., Ltd., fuel handling plant: Drysdale & Co., Ltd., four circulating water pumps: Ferranti, Ltd., static transformers: Metropolitan-Vickers Electric Co., 66,000 volt switchgear, 1-80,000 kVA turbo-alternator, and house service alternator and condensing plant: A. Reyrolle & Co., Ltd., 3,300-volt switchgear and 3,000-volt switchgear: S.M.S. Express, Ltd., five electric hoists: British Thomson-Houston Co., 1-80,000 kVA turbo-alternator, and house service alternator and condensing plant: Babcock and Willcox, six boiler units: Hopkinsons, Ltd., h.p. steam and feed valves: British Electric Transformer Co., transformers: Chloride Electrical Storage Co., two batteries: Bruce Peebles & Co., two motor converters: Lancashire Dynamo and Motor Co., motor generators and boosters: Bertram Thomas, Ltd., auxiliary l.p. switchgear: Electroflo Motors Co., boiler feed water meter testing equipment; Burntisland Shipbuilding Co., two up-river steamers: S. P. Austin and Son, two up-river steamers; Rees Roturbo Manufacturing Co. pumps: Vaughan Crane Co., 1-10-ton overhead electric crane: J. H. Wilson & Co., 1-8-ton steam loco jib crane: Craven Bros., Ltd., cranes and pulley blocks: Siemens Bros. & Co., Ltd., power station cables: Charles Ross, weighbridges: G. E. Taylor & Co., station lighting and earthing; Dorman Long & Co., Ltd., steel channels for scrubber elements: Trussed Concrete Steel Co., Ltd., Hy-Rib for tower, walls and conveyors.

Alliance Assurance Co., Ltd., Head Office Rebuilding (pages 572-575). General contractors, Trollope and Colls. Consulting Engineer, B. L. Hurst, M.I.C.E., M.I.M.E. Quantity Surveyor, A. J. H. Sprague, F.S.I. Sub-contractors: Willment Bros., demolition: Highways Construction Co., Ltd., asphalt: Braby & Co., pressed steel staircase, lift enclosure: Brookes, Ltd., Cornish granite plinths; Hobbs Hart & Co., strong rooms, etc.: Kleine Co., Ltd., hollow brick floors: Wandsworth Stone Co., stonework: S.M.S. Express Ltd., lifts; Young, Austen and Young, heating and ventilation, oil firing; F. H. Wheeler, electrical work; J. W. Gray, lightning conductors and flagpole; Henry Hope and Sons, casements; Hathern Station Brick and Terra Cotta Co., faience; Mather and Platt, dry rising mains and foam inlet pipes; John Bolding, sanitary fittings; J. A. King & Co., pavement and roof lights; Messrs. W. W. Jenkins, polished wall linings; Morris-Singer & Co., wrought iron work; Christie and Grey, Coresil foundation plates: Fenning & Co., polished wall linings: Richard Crittall & Co., kitchen equipment; W. B. Simpson & Co., Tiling: Shaw's Glazed Brick Co., interior faience to restaurant: Carter & Co., faience tiling to staircases and corridors, carterazzo treads and risers to pavings: James Clark and Son, glazing: Starkie Gardner & Co., bronze and wrought iron work; Crittall Manufacturing Co., Ltd., bronze laylights; T. B. Colman and Sons, revolving door; Nettlefold and Sons, ironmongery; India Rubber & Gutta Percha Co., Ltd., rubber flooring; Joseph Avery & Co., blinds; Horton & Co., liquid soap containers: Plastering, Ltd., fibrous plaster and granolithic; Stevens and Adams, wood block flooring: Mayfair Spraying and Decorating Co., paintwork.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

ACTON. *Houses and Flats.* Plans passed by the Corporation: Several new factories for Mr. F. E. Simpkins; eight shops and flats, Western Avenue, for Messrs. Marshall and Tweedy; 60 flats, Fairlawn Park, for Messrs. Hearn and Chuter: two houses, Western Avenue, for Mr. H. Greenwood; flats, Cumberland Lodge, Uxbridge Road, for Mr. E. C. Hardy; two shops, Seton Lane, for Mr. J. Raworth Hill; six houses, Rosemount Road, for Messrs. Cox and Hanshaw: pavilion, The Vale, for Mr. L. E. Marsh; 64 houses, Noel Road, for Mr. T. Alwyn Lloyd; seven shops and houses, Horn Lane, for Mr. J. E. Adams; three blocks of eight flats, Western Avenue, for Mr. W. Atkinson.

RUNFORD. *Mental Colony.* The East Ham Corporation has approved preliminary plans for the erection of a mental colony at Runford in association with the Southend Corporation, at an estimated cost of £444,600. Accommodation is to be provided for 875 patients.

SOUTHERN COUNTIES

BOURNEMOUTH. *Houses and Flats.* Plans passed by the Corporation: Five houses, Edgehill Road, for Messrs, G. E. and W. Lambert; nine bungalows, Hillview Road, for Mr. F. E. Etches; four bungalows, Denmead Road, for Messrs. C. Garrett and Sons, Ltd.; eight flats, The Avenue, for Mr. B. Burt; two houses, Colemore Road, for Mr. C. W. Garrett; two houses, William Road, for Mr. H. W. King; four flats, Green Road, for Mr. F. W. Holloway; 21 flats, Poole Road, for Mr. D. A. Wood; four flats, Kimberley Road, for Mr. E. C. White; two houses, Haverstock Road, for Mr. V. F. Sheppard; two houses, Harewood Avenue, for Mr. J. N. Hardy; four houses, Marks Road, for Mr. H. Masters; two houses, William Road, for Mr. A. E. Reading; two shops, Wimborne Road, for Messrs. Tomlinson and Matley; alterations, King's Arms Hotel, High Road, Wallisdown, for Messrs. Eldridge Pope & Co.; two houses, Broadway Lane, for Mr. L. W. Stearne; four bungalows, Ringwood Road, for Mr. H. Barnes; two houses, Christchurch Road, for Mr. E. J. Mayne; three houses, Meon Road, for Mr. C. H. White; eight flats, Christchurch Road, for Messrs. Rosser and Sturman; two houses, High Howe Lane, for Mr. W. H. White; flats and garages, Dalkieth Lane, for Mr. R. F. Seward; two houses, Shelton Road, for Messrs. Collier and Son; two bungalows, Harting Road, for Mr. W. Ward: two houses, Riverside Road, for Messrs. G. B. Ive and Son; eight houses, Bradpole Road, for Mrs. M. E. Lee.

NEWBURY. *Estate Development.* The Corporation has passed the following estate development plans: 33 acres, Fifth Road, for Mr. J. R. Avory of High Wycombe; nine acres near Rectory, for Mr. A. J. Campbell Cooper; five acres, Camp Close, for Messrs. Hall and Rowlands.

EASTERN COUNTIES

COLCHESTER. *Houses.* Plans passed by the Corporation: Four houses, Lexden Road, for Mr. C. Brown; two houses, St. Andrew's Road, for Mr. A. E. Sparrow; two houses, Gladwin Grove, for Messrs. J. Moss and Son; two houses, Rowhedge Road, for Mr. C. Rowe: office, workshop and three houses, Straight Road, Lexden, for Mr. R. T. Clarke: shop, Harwich Road, for Mr. S. A. James: four houses, Mill Road, Mile End, for Mr. A. J. Diss: two houses, Glen estate, Lexden, for Messrs. Baker and Burton.

MIDLAND COUNTIES

BIRMINGHAM. *Airport.* The Corporation recommends the acquisition of land for a municipal airport, the total cost of which is estimated at £70,000.

CHESTERFIELD. *Houses.* Plans passed by the Corporation: Four houses, off Newbold Road, for Mr. L. W. Crossley; two houses, Newbold Road, for Mr. A. Burnham; four houses, Morris Avenue, for Mr. J. T. Lomas; eight houses, Mayfield Road, for Mr. W. Rhodes; two houses, Walton Road, for Mr. W. Marriott; two houses, Derby Road, for Messrs. Ervine & Co.; dairy, Green Farm, Newbold, for Mr. L. Needham; two houses, Walgrove Road, for Messrs. Fairburn and Wale; four houses, Storrs' Road, for Messrs. J. Collis and Sons, Ltd.: two houses, Valley Road, Spital, for Messrs. Clarke Bros.; two houses, Hady Hill, for Messrs. C. Buckley and Sons: two houses, Gloucester Road, for Mr. J. Short; dairy, Overholm Farm, Cutthorpe, for Mr. T. W. Booker; two houses, off Hawksley Avenue, for Messrs. J. H. Naylor and Sons; additions and alterations, Poor Law Institution, Newbold Road, for Derbyshire County Council.

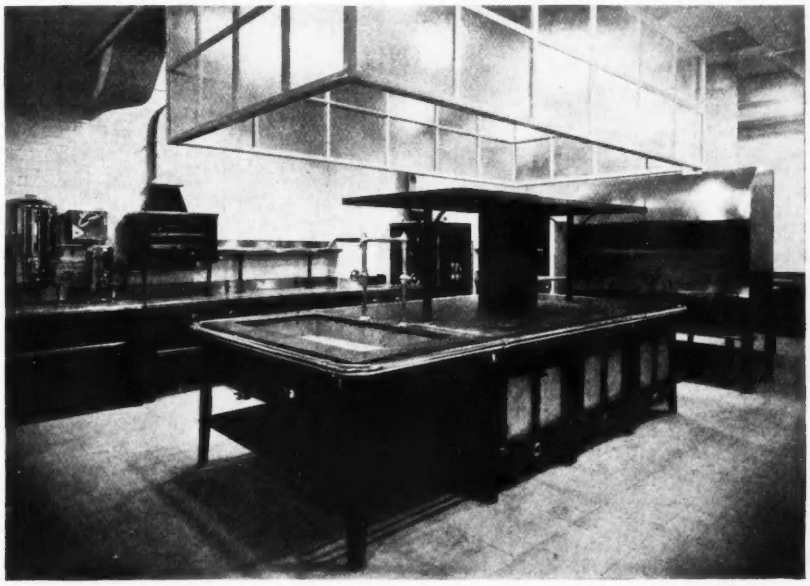
KIDDERMINSTER. *Houses and Roads.* Plans passed by the Corporation: 14 houses, Foxholes estate, for Messrs. Holt and Shaw; two houses, Stourbridge Road, for Mr. S. J. Shakespeare; roads and sewers, off Sutton Park Road, for Messrs. Lacy Bros.; two houses, Stourbridge Road, for Messrs. Humphries and Bowdler.

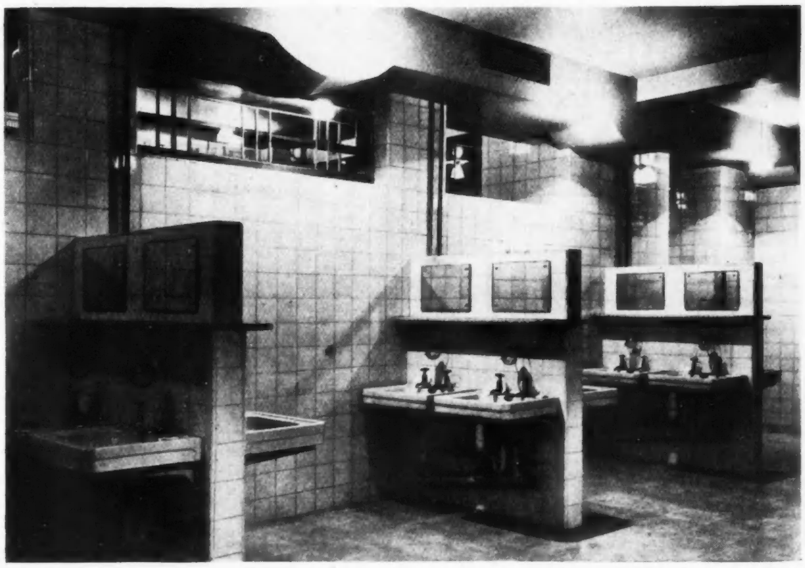
NORTHERN COUNTIES

BIRKENHEAD. *Houses and Site Development.* Plans passed: 20 houses, Donford Road, for Mr. A. H. Boulton; 58 houses, Manor Hill estate, for Hamilton Estates, Ltd.; development at Wood Lane, etc., for Park Estates (Wirrall) Ltd.; site development, corner of Egerton Road and Palm Grove, for Messrs. Hughes Bros.; four houses, Warfedale Avenue, for Mr. H. A. Thomas.

CHESTER. *Houses and Shops.* Plans passed by the Corporation: Shop, 83-5 Foregate Street, for Messrs. J. Hepworth and Son, Ltd.; two houses, Lache Lane, for Miss S. M. Tilson; 30 houses, Newry Park, for Mr. E. Gardham; five cottages, Handbridge, for Mr. T. A. Beckett.

TYNEMOUTH. *Houses.* The Corporation is to prepare amended plans for the erection of 92 houses on the Ridges estate.





Two interior photographs of the Alliance Assurance Co.'s Building, by Messrs. Joseph and Mewès and Davis, joint architects. Top: the kitchen. Bottom: the staff lavatory. The building is illustrated on pages 572-575 of this issue.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen ; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	Aberdare	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	Banbury	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B_3	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A_3	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5½	1 1¼
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A_1	Buxton	N.W. Counties	1 5	1 0¾
A_2	Cambridge	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A_3	Cumberland	N.W. Counties	1 4	1 0
A	Darlington	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
A_2	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	Eastbourne	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	Felixstowe	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	Gateshead	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	Halifax	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	Ilkley	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	Jarrow	N.E. Coast	1 5½	1 1¼
A	Keighley	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	Lancaster	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	Macclesfield	N.W Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	Nantwich	N.W. Counties	1 4½	1 0½
A	Neath	S. Wales & M	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	Oakham	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	Paisley	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	Queensferry	N.W. Counties	1 5½	1 1¼
A_2	Reading	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	St. Albans	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	Tamworth	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1¼
A	Tyne District	N. E. Coast	1 5½	1¼
A	Wakefield	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A_3	Worksop	Yorkshire	1 4	1 0
A_1	Wrexham	N.W. Counties	1 5	1 0¾
A_3	Wycombe	S. Counties	1 4	1 0
B_1	Yarmouth	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

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* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
White Portland Cement	,,	8	15	0
Thames Ballast	per Y.C.		0	9
⅜" Crushed Ballast	,,		7	6
Building Sand	,,		7	9
Washed Sand	,,		8	9
2" Broken Brick	,,		8	3
⅜" ,, ,,	,,		11	6
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

Best Stoneware Drain Pipes and Fittings

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
Iron Drains:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	9	2	6
,, Wirecuts	,,	8	2	6
,, Brindles	,,	7	6	6
,, Bullnose	,,	9	14	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	8	8	0
Luton Facings	,,	8	0	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey per 1,000 (actual)		21	11	6
,, green ,,	,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		2	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		19	0
,, ⅞"	,,	1	1	6
,, 1"	,,	1	3	6
,, 1¼"	,,	1	7	6
,, 1½"	,,	1	12	0
Deal matchings ⅝"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1½"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
Tubes.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
Fittings.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	,,	8	6
,, ,, ⅜"	,,	8	3
,, ,, ½"	,,	8	0
,, ,, ⅝"	,,	7	6
,, ,, ¾"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		9		11
Shoes	each	2	3	3	3
Anti-splash shoes	,,	5	0	8	6
Boots	,,	3	3	4	5
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		7
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	1	0
,, drawn pipes	,,		18	0
,, soil pipe	,,	1	5	0
,, scrap	,,		13	6
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			10½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	0	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2½
,, ,, 26 oz. ,, ,, ,,	,,					3¾
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
¼" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	0
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12″ deep and cart away	Y.S.		2	9
„ to reduce levels n/e 5′ 0″ deep and cart away	Y.C.		8	6
„ to form basement n/e 5′ 0″ deep and cart away	„		9	0
„ „ 10′ 0″ deep and cart away	„		9	6
„ „ 15′ 0″ deep and cart away	„		10	0
If in stiff clay . . . add	„		2	6
If in underpinning . . . „	„		4	0
Digging, return, fill and ram . . . „	„		4	0
Planking and strutting to sides of excavation	F.S.		1	0
„ „ to pier holes	„			5
„ „ to trenches	„			5
„ „ extra, only if left in	„			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	„	1	6	0
„ „ (4-2-1)	„	1	12	6
„ „ underpinning	„	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4″ s.	4″ d.	6″ s.	6″ d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and grating	„	16	6	18	0
Cast iron drains and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
„ „ in cement	„	29	15	0
„ Stocks in cement	„	35	15	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			5½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
¾″ Horizontal dampcourse	Y.S.	4	6
¾″ Vertical dampcourse	„	6	9
¾″ paving or flat	„	4	0
1″ paving or flat	„	5	6
1″ × 6″ skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	3	10	0
Do., 18″ × 9″	„	3	7	0
Do., 24″ × 12″	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles	„	2	16	0
20″ × 10″ medium Old Delabole slating, laid to a 3″ lap (grey)	„	4	6	6
„ „ „ „ „ „ (green)	„	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾″ deal sawn boarding and fixing to joists	Sqr.	1	14	6
1″ „ „ „ „	„	1	17	6
1¼″ „ „ „ „	„	2	3	0
¾″ × 2″ fir battening for Countess slating	„		9	6
Do. for 4″ gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9″ joists	F.R.			10½
1″ deal gutter boards and bearers	F.S.		1	2
1¼″ „ „ „ „ „	„		1	6
2″ deal wrought rounded roll	F.R.			8
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼″ do.	„	2	12	6
1½″ do.	„	2	19	0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1¼″ do.	„		1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½″ deal moulded sashes of average size	F.S.	1	11
2″ „ „	„	2	1
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1½″ heads, 1″ inside and outside linings, ⅜″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	3	9
2″ „ „ „	„	4	0
Extra only for moulded horns	Each		6
1½″ deal four-panel square, both sides, door	F.S.	2	0
2″ „ „ „	„	2	8
1½″ „ but moulded both sides	„	2	4
2″ „ „ „	„	3	0
4″ × 3″ deal, rebated and moulded frames	F.R.	1	2
4½″ × 3½″ „ „	„	1	8
1¼″ deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½″ deal moulded wall strings	„	2	1
1½″ „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3″ × 2″ deal moulded handrail	F.R.	1	3
1″ × 1″ deal balusters and housing each end	Each	2	0
1½″ × 1½″ „ „	„	2	9
3″ × 3″ deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	6
Do. in flashings		1	18	0
Do. in covering to turrets, etc.	„	2	4	0
Do. in soakers	„	1	10	0
Labour to welted edge	F.R.			3½
Open copper nailing	„			3½
Close „ „	„			4½

		½″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	„	6½	8	9	11	1	—
Boiler screws and unions	„	3 3	3 9	5 0	8 0	—	—
Lead traps	„	—	—	—	6 3	8 9	—
Screw down bib valves	„	6 9	9 6	11 0	—	—	—
Do. stop cocks	„	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	2	9
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

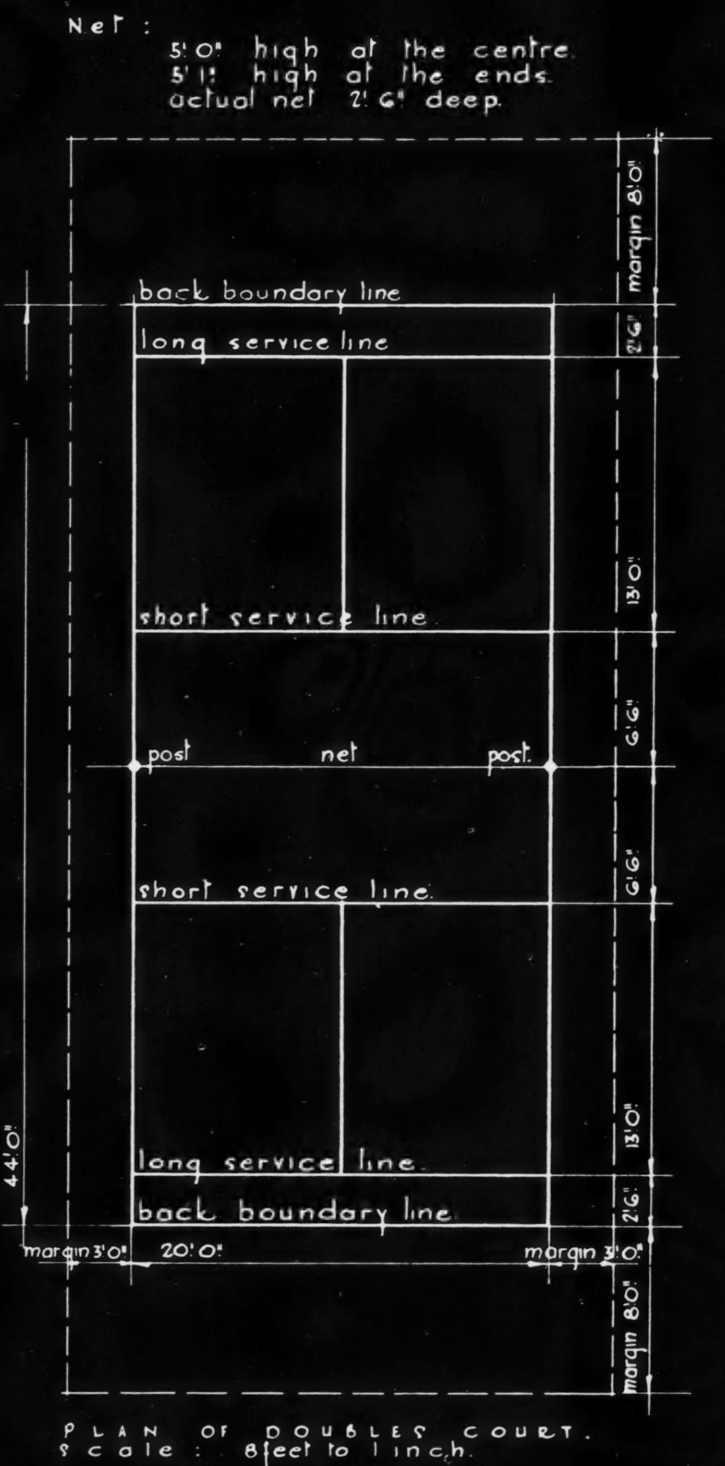
		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	9
Do. vertical	„		2	3
Rough render on walls	„		1	4
Render, float and set in lime and hair	„		2	0
Render and set in Sirapite	„		2	2
Render, backing in cement and sand, and set in Keene's cement	„		3	1
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R.			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1″ girth	„			1½
1″ granolithic pavings	Y.S.		3	6
1½″ „	„		4	6
6″ × 6″ white glazed wall tiling and fixing on prepared screed	„		17	6
9″ × 3″ „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	[illegible]
Hanging ordinary paper . . . from	„	2	9


Net :
5' 0" high at the centre.
5' 1" high at the ends.
actual net 2' 6" deep.
back boundary line
long service line
short service line.
post
net
post.
short service line.
long service line.
back boundary line.
margin 8' 0"
2' 6"
13' 0"
6' 6"
6' 6"
13' 0"
2' 6"
44' 0"
margin 3' 0"
20' 0"
margin 3' 0"
margin 8' 0"

PLAN OF DOUBLES COURT.
Scale : 8 feet to 1 inch.

INFORMATION SHEET : LAYOUT OF BADMINTON COURT

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

• 49 •

LAY-OUT OF BADMINTON COURT: I

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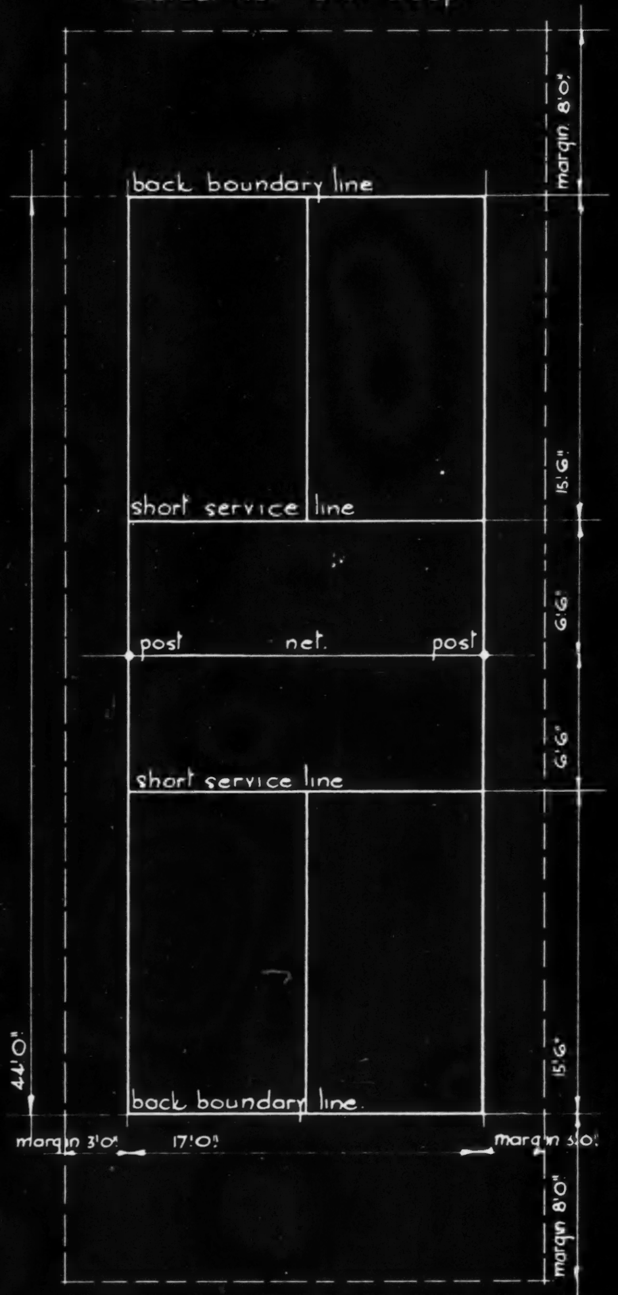
THIS week we continue the weekly series of Information Sheets, interrupted owing to the publication of last week's special London Slum Issue. Of the set of Sheets now in progress, devoted to the requirements of various games, we publish the fifth and sixth of the series, giving the lay-outs of badminton courts (singles and doubles).

The following is a full list of the subjects previously issued :—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units : I.
13. Apr. 12—Lavatory Units : 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes.
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs : I.
23. June 29—Concrete Stairs : 2.
24. July 6—Pressed Steel Stairs : I.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs : 2
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes : I.
30. Aug. 17—Lay-out of Wardrobes : 2.
31. Aug. 24—Common Sizes Miscellaneous.
32. Aug. 24—Electric Lighting : I.
33. Aug. 31—Electric Lighting : II.
34. Aug. 31—Electric Lighting : III.
35. Sept. 7—Electric Lighting : IV.
36. Sept. 7—Vacuum Cleaning Systems.
37. Sept. 14—Steelwork : I.
38. Sept. 14—Steelwork : II.
39. Sept. 21—Steelwork : III.
40. Sept. 21—L.C.C. Waivers : I.
41. Sept. 28—L.C.C. Waivers : II.
42. Sept. 28—L.C.C. Waivers : III.
43. Oct. 5—L.C.C. Waivers : IV.
44. Oct. 5—Phorpres Cellular Flettons.
45. Oct. 12—Lay-out of Hockey Field.
46. Oct. 12—Lay-out of Tennis Court.
47. Oct. 19—Lay-out of Rugby Field.
48. Oct. 19—Lay-out of Association Field.

Net :
5' 0" high at the centre.
5' 1" high at the ends
actual net 2' 6" deep.


margin 8'0"
back boundary line
15'6"
short service line
6'6"
post
net.
post
6'6"
short service line
44'0"
15'6"
back boundary line.
margin 3'0"
17'0"
margin 3'0"
margin 8'0"

PLAN OF SINGLES COURT.
Scale : 8 feet to 1 inch.

INFORMATION SHEET : LAYOUT OF BADMINTON COURT.
SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1

Supplement to THE ARCHITECTS' JOURNAL for November 2, 1933

INFORMATION SHEETS

• 50 •

LAY-OUT OF BADMINTON COURT : 2

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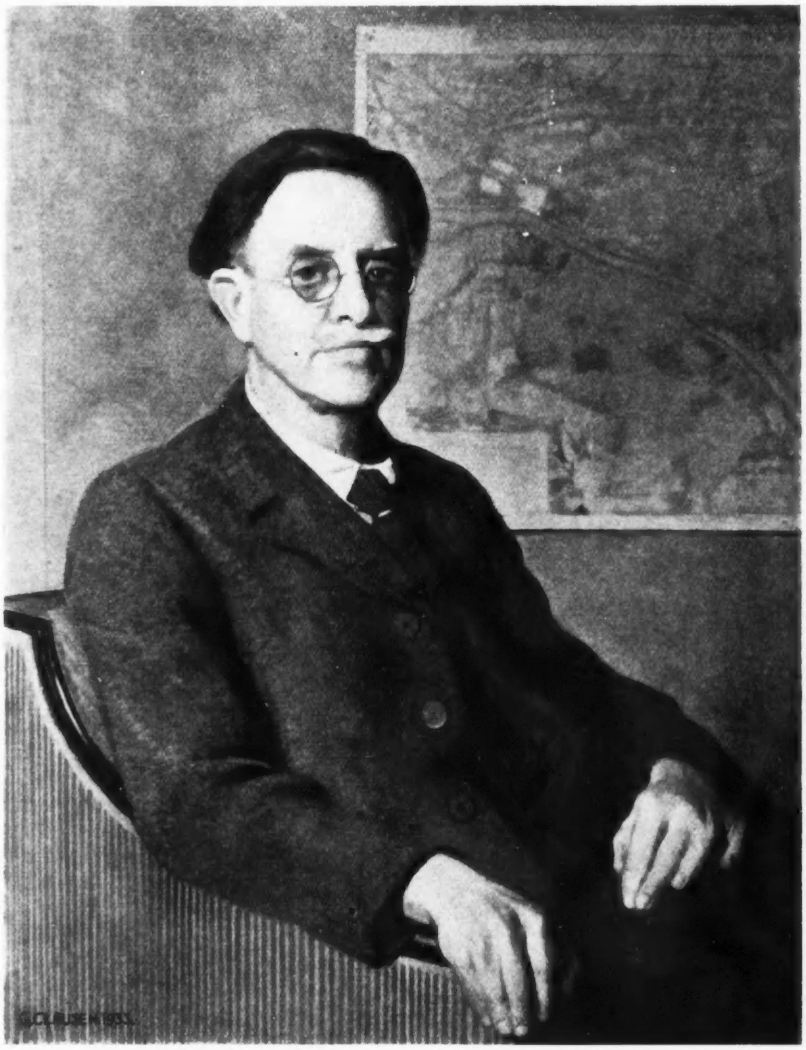
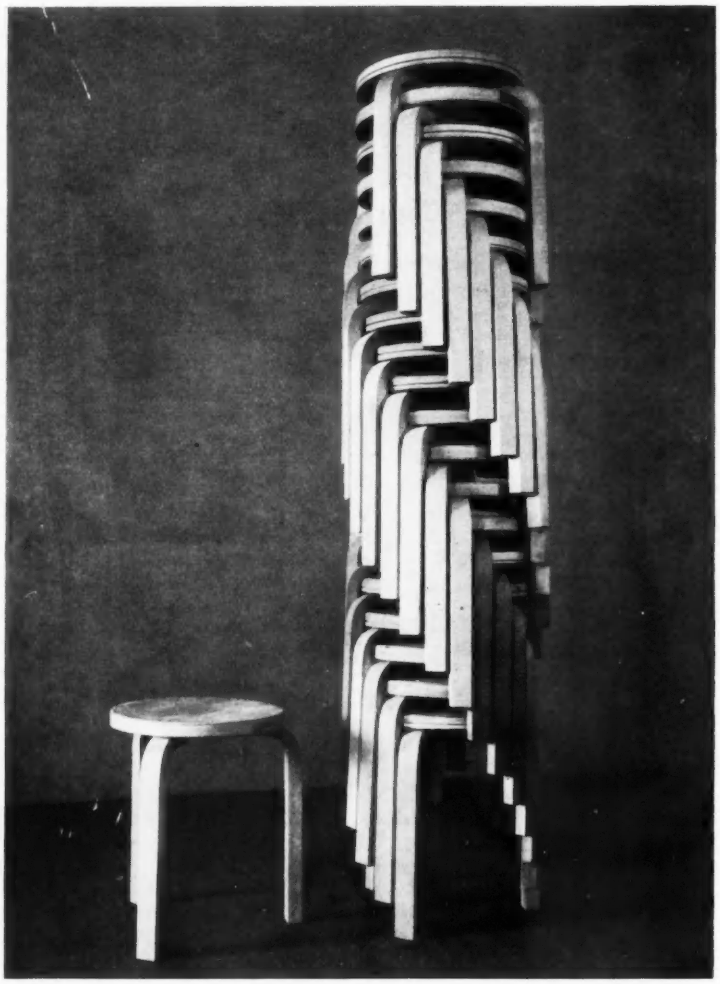
FOR a list of the Information Sheets previously issued, see the other Sheet accompanying this issue.

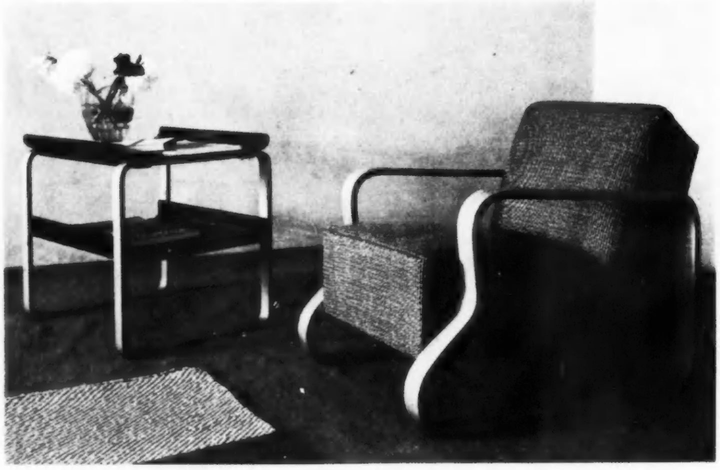
SIR. RAYMOND UNWIN

PORTRAIT FOR THE R.I.B.A.



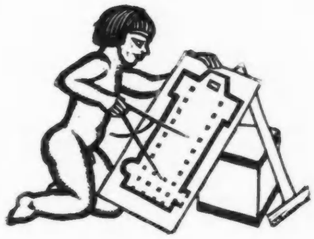
THE above portrait of Sir Raymond Unwin, Past President of the R.I.B.A., was unveiled and presented to the Royal Institute at the first meeting of the new session, held on Monday last. The portrait is the work of Sir George Clausen, R.A.





FURNITURE FROM FINLAND

Some examples of the furniture designed by Alvar Aalto and Aino Marsio-Aalto, which is to be exhibited this month in London. See this week's leading article.



FINLAND AND ENGLAND

An Exhibition of Finnish Laminated Furniture has been organized by " The Architectural Review " with the co-operation of Fortnum and Mason, Ltd., which is to be opened at 181 Piccadilly on November 13. Herr Alvar Aalto and Fru Aino Marsio-Aalto, who designed the majority of the exhibits, have come to England to supervise the arrangements.

IN welcoming that distinguished Finnish architect, Alvar Aalto, on his first visit to England it is our privilege to honour one of the outstanding designers of the present generation. For that is the reputation which his " Turun Sanomat " offices and Paimio Sanatorium have deservedly won for him. At thirty-five Aalto has taken modern architecture beyond the good and evil of that German fetish, functionalism. He has infused its bare bones with a vital human spark and re-asserted the dignity of the human scale without the least concession to adventitious ornament.

There are important lessons for us to learn from Aalto's life and work. Architects often have bigger chances in small countries than in large ones. Paimio, for instance, is both psychologically and structurally far ahead of anything the medical profession has yet demanded for either sanatoriums in general, or tubercular sanatoriums in particular. It is what it is because the Finnish state believes that their best architect is a better judge of how such a building should be planned and equipped than any hospital board.

In Finland also the industrialist regards the architect not merely as a planner of factories, but as " the competent authority " for determining the shape of the goods made in them. Timber is the great national industry. Its products and by-products represent the chief Finnish exports, of which Great Britain is the principal market. The vogue of metal furniture threatens the supremacy of wooden furniture, in the manufacture of which Finland is both directly and indirectly interested. Faced by this situation the Finnish timber industry turned to Aalto and invited his help. They did not suggest that he should titivate existing forms to make them look " modernistic." They asked him to evolve entirely new rationalized types, corresponding to modern needs, that they could be mass-produced at the lowest possible cost. After three years of continuous experiments in the elastic properties of wood, Aalto produced those two main types of " feather line " armchairs which Finland is now exporting all over the world. The individual form and revolutionary construction of these all-plywood chairs have brought him a wider international fame than any of his buildings.

Cheap reproductions of pseudo-traditional English furniture made by certain small Finnish firms have latterly been undercutting our own. This form of " cultural dumping " has profoundly wounded Finnish national pride. The Finns want the furniture they send to England not only to be their best, but purely Finnish in design. Hence this exhibition, the object of which is to demonstrate that Finland has achieved quality in cheapness ; and succeeded in combining real elegance and comfort with extreme lightness and virtual indestructibility.

If Aalto is not exactly impressed with our post-war architecture (but what intelligent foreigner ever is ?), his admiration is unbounded for the work of that " Unknown British Architect " who has survived the industrial revolution unscathed. The " Unknown British Architect " is the aristocrat who fashions our English locomotives and omnibuses, our boots and shoes, our clothes and shaving-brushes—in a word the unwitting *arbiter elegantiarum* of the essentially English shapes that no one has ever associated with the self-conscious veneer we most of us understand by " Art." Yet these are the things in which we excel, and for which the whole world has taken its models from us.

According to Aalto the most marvellous functional design in existence is the covering of a tennis ball with a couple of dumbbell-shaped strips of cloth that interlock as perfectly as a dovetailed joint. And that again is English, though (thank heavens) very far from being " Art." In what, then, does applied English art elect to manifest itself ? Things, it has to be admitted, we have mostly to blush for ; like our postage stamps and coins (on the other hand the old £5 note is as superb as the new £1 note is paltry). England is the proverbial home of ordinary everyday things rationalized—and humanized in the process—to their simplest possible terms. Isn't it about time we began to realize this, and feel a proper pride in the tenacious survival of such a reputation ? And isn't it about time, too, that we turned to them rather than the latest Continental " ism " in our quest of an architectural idiom that shall be at once English and contemporary ? It is something more than humiliating that we should need an Aalto or a Paulsson to appraise the eternally " modern " worth of all these admirable and unheeded forms, and draw our startled attention to them. But humiliating or not, it is clear that either could do what apparently no Englishman can, or, if he can, thinks worth while : organize an exhibition of the shapes that are English which would be a revelation to Europe, to say nothing of ourselves.

Meanwhile there is a lot to be learned about rational design from Aalto's work at Fortnum and Mason's.

The Architects' Journal
9 Queen Anne's Gate
Westminster, S.W. 1
Telephone: Victoria
6 9 3 6
Telegrams:
Buildable
Parl
London

NOTES & TOPICS

WITHOUT FRONTIERS

THE United States of Europe exists, in spite of My Lord Beaverbrook, for, as someone once remarked : *art has no frontiers.* Some of the most satisfactory solutions to the use of contemporary materials have been provided by the distinguished Finnish designer, Alvar Aalto, who is now on a visit to England.

*

An exhibition of his work has been arranged jointly by Messrs. Fortnum and Mason and *The Architectural Review*, and it will open at the Piccadilly premises of Fortnum's on November 13.

*

Herr Aalto has solved the problem of associating curved plywood with curving metal frames : he has solved it as a master of modern materials rather than as their frightened servant.

*

He is not afraid of imposing his own urbane taste upon such malleable things, and his plywood chairs delight the eye and comfort the recumbent body without offending the nervously fastidious consciences of those alleged modernists who insist that materials should inspire all forms instead of human needs and agreeable human foibles.

*

I wonder what the furniture trade will think of it all.

DR. NEURATH

Another distinguished visitor here is Dr. Otto Neurath, of the Mundaneum Institute, Vienna. Statistics mean a great deal to us today, or rather, they mean a great deal when we can understand them.

*

It is Dr. Neurath's invaluable contribution to a world ridden with graphs and figures that he has been able by means of his system of " picture statistics " to give figures the force of a first-hand emotion.

*

It sounds a simple thing to work out a system of attractive and expensive symbols. But try, even with an elementary problem, to arrive at a satisfactory differentiation of symbols, and you will realise how vastly important to countless organizations, besides the professions of architecture and town planning, Dr. Neurath's beautifully presented science of persuasive statistics has become.

*

The MARS Group, following upon an earlier application to him, have arranged for Dr. Neurath to speak on "Pictorial Statistics for Housing and Town Planning" at a public meeting at 8.45 p.m. on Tuesday, November 14, in the lecture theatre of the School of Tropical Medicine, Gower Street, and invite all who are interested to attend.

ARCHITECTURE ON WHEELS

Anybody who feels a little depressed about contemporary design should visit the Commercial Motor Show at Olympia. It will cheer them up. It is excellent in every way.

*

Commercial vehicles have never been forced to imitate the stage coach. They have no ancestors to corrupt and complicate their form. The result is the best buses, lorries and trucks in the world.

*

An artist after seeing the Show remarked rather bitterly to me, " The best architecture of this miserable age is on wheels ! "

*

Without agreeing with him entirely, I admit that much of it is superior to the pedestrian stuff that lines many of our streets.

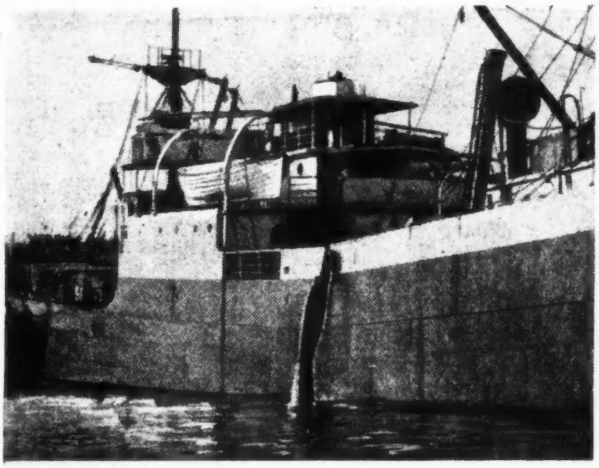
OBITUARY

I have received this note from a reader :—

Actual photograph of the architect with a broken back enclosed

[Photo ; Hazen Sise

Dr. Otto Neurath, of the Mundaneum Institute, Vienna, who is to lecture in London on November 14. See note on this page.



The broken back of the Harrison liner, Architect, is clearly shown in this picture. The vessel grounded on Pluckington Bank in the Mersey, and efforts to refloat her have been unsuccessful. She has a cargo of machinery and general merchandise.

From a daily paper. See note on this page.

herewith—the old fallacy that they died from pink spots in the eyes is thus destroyed.

I believe the latest in scientific breeding to counteract this weakness is to cross them with steel engineers to gain strength, and occasionally an estate agent or valuer to offset any tendency to a too rigid spinal column (this was formerly balanced between two Gillish lions).

SUSPENSE

The L.C.C. are going to rebuild Chelsea Bridge. My heart sank when I read the announcement in the paper, for knowing the force of habit I wondered how the L.C.C. could break themselves of their weakness for these hybrid affairs of steel and stone.

*

But no. It is to be a suspension bridge as the present one is, and that delightful phantasy in Mr. John Gloag's last book, *The New Pleasure*, in which, through the rarified air of a future London, this bridge is described as glistening with its unsullied covering of pure white paint, may yet come about.

ART AND CRAFT

The other day I got by post, the most illegible circular which it has ever been my misfortune to see. The type was just about the size of that in which these notes are printed—but it was all in " even capitals."

*

" Even caps " are hard enough to read at any time ; but this lot had no paragraphs either ; and the lines were just over double the length of these which you are reading.

*

On looking into the matter I found some punctuation. It was all a list of people who were exhibiting things at an exhibition ; and between each pair of exhibitors and their exhibits was the dinkiest quatrefoil.

*

So I went to the Central Hall to see the " Artist-Craftsman Christmas Exhibition," which was the most cogent argument for machine production which could possibly have been produced.

*

I have no dislike of the artist. The craftsman (when you can find him) I most heartily respect.

But " artist-craftsmen," as represented by this exhibition, must be a quainter and quainter lot as time goes on—" Heroes in Homespun."

*

If they merely made roughly and by hand what the machine makes smoothly and quickly I could find some excuse. In fact I should regard them as a potential influence towards better machine production.

*

The first urge of the " artist-craftsman " seems to be to eliminate all those important traditional characteristics, which (so far from being mere affectations) represent the concentrated essence of experience, and have for centuries been employed in the name of practical efficiency, by *real* craftsmen.

*

The second urge is to out-license Liberty's—as it used to be.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, November 9

INSTITUTION OF STRUCTURAL ENGINEERS. At 10 *Upper Belgrave Street, S.W.*1. " Reinforced Concrete Railway Viaducts." By R. L. M'Ilmoyle. 6.30 p.m.

Yorkshire Branch. At the Hotel Metropole, Leeds. " Designing for Welding." By C. Helsby. 7 p.m.

*INSTITUTION OF ELECTRICAL ENGINEERS. At the Institution, Savoy Place, Victoria Embankment, W.C.*2. " The Lower Voltage Sections of the British Grid System." By C. W. Marshall. Refreshments. 5.30 p.m. for 6 p.m.

WORSHIPFUL COMPANY OF CARPENTERS. At the Carpenters' Hall, Throgmorton Avenue. " Heating and Ventilating." By Martin S. Briggs, F.R.I.B.A. 7.30 p.m.

Friday, November 10

INSTITUTION OF STRUCTURAL ENGINEERS. (Western Counties Branch.) At the Merchant Venturers' Technical College, Bristol. " Some Test Results on Structural Steel Sections." By Ewart S. Andrews. 7.15 p.m.

Scottish Branch. Dinner at the *Grosvenor Restaurant, Glasgow.* 6.30 for 7 p.m.

Midland Counties Branch. At the James Wall Memorial Institute, Birmingham. " Military Engineering, 1915–18." By H. W. Coultas. 6.30 p.m.

*TOWN PLANNING INSTITUTE. At Caxton Hall, S.W.*1. Presidential Address. By T. Alwyn Lloyd. 6 p.m.

Saturday, November 11

ARCHITECTURAL ASSOCIATION. At 36, *Bedford Square, W.C.*1. " The Housing Problem : The Solution for the Country." By W. Harding Thompson. 3 p.m.

Monday, November 13

*INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Borough Polytechnic, S.E.*1. " Practical Determination of Heat Transmission from Buildings." By S. F. Greenland. 7 p.m.

Tuesday, November 14

MARS. A lecture arranged by this group. *At the London School of Hygiene and Tropical Medicine, Gower Street, W.C.*1. " Pictorial Statistics for Housing and Town Planning." By Dr. Neurath. 8.45 p.m.

*THE ILLUMINATING ENGINEERING SOCIETY. At the Institution of Mechanical Engineers, Storey's Gate, S.W.*1. " The Development of Aviation Lighting." By Major R. H. S. Mealing. 7 p.m.

ST. PAUL'S ECCLESIOLOGICAL SOCIETY. At the R.I.B.A., 9 *Conduit Street, W.*1. " The English Parish Church, Wren and the Eighteenth Century." By A. T. Bolton, F.S.A., F.R.I.B.A. 8 p.m.

CAMBRIDGE UNIVERSITY ARCHITECTURAL SOCIETY. At the Mill Lane Lecture Rooms. " The Warming of Modern Buildings." By Rendell Davies. 8.15 p.m.

Wednesday, November 15

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. (Manchester and District Branch.) At the Engineers' Club, Albert Square, Manchester. " Instruments used in connection with Air Conditioning Plant." By C. M. V. Benwell. 7 p.m.

NEWS

●

POINTS FROM THIS ISSUE

In Finland the industrialist regards the architect not merely as a planner of factories, but as "the competent authority" for determining the shape of the goods made in them *589*

The things in which we excel, and for which the whole world has taken its models from us *589*

A public meeting arranged by the MARS *Group* *590*

In most successful contemporary kitchens the larder has dissolved into various cupboards round the room *607*

Under urban conditions, where cheap gas or electricity are both available, there is no longer any excuse for splitting the kitchen functions between the living-room and scullery *612*

●

CHELSEA BRIDGE

The Improvements Committee of the London County Council, in a report presented to a meeting of the Council on Tuesday, recommended the reconstruction and widening of Chelsea Bridge to take four lines of vehicular traffic. The scheme is estimated to cost £480,000, of which sum 60 per cent. is to be borne by the Ministry of Transport.

WESTMINSTER HOSPITAL

The Governors of Westminster Hospital have issued an appeal for £100,000 for the removal of the Hospital to a larger site in Horseferry Road, S.W. The appeal will close on March 31 next.

EXHIBITION OF WORK BY SERGE CHERMAYEFF

An exhibition entitled "Modern Living," comprising work by Serge Chermayeff, F.R.I.B.A., is to be opened at Messrs. Whiteley's, Queen's Road, W.2, next week.

NEW AMUSEMENT CENTRE FOR PORTSMOUTH

Lumps Fort, Southsea, which was recently sold by the War Office to the Portsmouth Corporation for £25,000, is to be turned into an amusement centre. A scheme has been prepared for levelling the fortifications and spending about £200,000 in building on the site a concert hall, a restaurant, a museum, a large swimming pool, etc. The scheme is to be submitted to the Portsmouth City Council today.

INDUSTRIAL RE-EQUIPMENT BY BUILDING

It is becoming increasingly clear that we are now on the eve of a new era of industrial reconstruction. The capacity for recovery shown by British industry in the last few months indicates that a movement towards industrial and commercial re-equipment is essential.

The building and allied industries must be in a position to take their place in this work, and to assure the industrial building owner and potential owner that the continuance of production in any but the most modern well-planned factories is uneconomic. With low costs and high unemployment in the building industry, no time is more propitious than the present for progressive industrialists. The building industry must take advantage of the situation.

The acknowledged mouthpiece of the industry as a whole is the Building Industries National Council through its Special Committee for Public Relations. Subscriptions to assist the Committee in its work of stimulating the trade of the industry should be addressed to the Hon. Treasurer, at 5 Duke Street, Adelphi, W.C.2, and should be made payable to "The Special Committee for Public Relations."

WEST YORKSHIRE SOCIETY OF ARCHITECTS

The Earl of Harewood, K.G., opened an exhibition of photographs, models, and perspective drawings of work executed by members of the above Society, at the Leeds City Art Gallery, on November 4. The following members (of Leeds, except where otherwise stated) are represented by contributions: Messrs. Chorley, Gribbon and Foggitt; R. B. Armistead (Bradford); G. W. Atkinson; Bain and Johnson; G. F. Bowman and Son; Braithwaite and Jackson; W. A. Burnett; Butler Wilson; F. L. Charlton; C. H. Crowther; Norman Culley (Huddersfield); W. F. Dawson; A. E. Dixon; R. A. Easdale and Son (Castleford); Empsall, Clarkson and Clarke (Bradford); C. Hickson (Huddersfield); W. Alban Jones and Stocks; Kirk and Tomlinson; Milner and Craze (Skipton); W. J. Morley and Son (Bradford); Paxton and Hill; P. O. Platts (Wakefield); J. C. Procter; E. O. Robinson (Bingley); Percy Robinson; L. N. Sanderson (Scarborough); F. Tanner (Harrogate); J. J. Wood; and J. Stanley Wright.

LIVERPOOL ARCHITECTURAL SOCIETY

Mr. R. A. Duncan, A.R.I.B.A., in the course of an address to the Liverpool Architectural Society on November 1, said: "The more disordered the social economic system becomes, the more individuals will endeavour to extricate themselves by increased ingenuity in the design and use of mechanical devices and the application of power. A stage is approaching, if it has not already been reached, in which development and progress cease to be synonymous terms. At this point, unless a reordering which harmonizes the whole system can be achieved, disintegration will supervene."

It was announced that the H. H. Williams prize for a design in concrete had been awarded to Mr. G. Leslie Parkinson.

NOTTINGHAM, DERBY AND LINCOLN ARCHITECTURAL SOCIETY

Mr. A. N. Bromley, F.R.I.B.A., in an address before the above Society, at Nottingham, on November 1, said modern sculpture was so ugly—he might even say indecent—that it was amazing. As for the Shakespeare Memorial Theatre, he could only refer to the plumber's wife who, seeing the building for the first time, exclaimed: "Oh dear, I thought it was a beet factory."

BIRMINGHAM AND FIVE COUNTIES ARCHITECTURAL ASSOCIATION

The following lectures have been arranged by the Birmingham and Five Counties Architectural Association:—November 17: "Architectural Drawings," by W. M. Keesey, A.R.I.B.A., A.R.C.A.; December 1: "Royal Hospital School, Holbrook, Suffolk" (Architects: Messrs. Buckland & Haywood), by William Haywood, F.R.I.B.A.; December 8: Annual Dance, Birmingham School of Architecture, at Edgbaston Assembly Rooms; December 15: "Co-ordination of Engineering Services," by Dr. Oscar Faber, O.B.E., D.SC., M.I.C.E.

1934.—January 5: "Town Planning and Architecture," by Thomas Sharpe, A.R.I.B.A.; January 19: "Plaster and Fibrous Plaster," by F. Jackson; February 2: "Birmingham Hospitals Centre," by T. A. Lodge, O.B.E., F.R.I.B.A., F.S.I.; February 9: Students' Evening; February 5-10: Students' Exhibition; February 12-17: Members' Exhibition of Drawings; February 16: Annual Dinner, at Queen's Hotel; February 23: "B.A.A. Annual Excursion to Holland," by H. J. Phillips, A.R.I.B.A.; April 13: "A Layman's View of Architecture," speaker to be announced later.

The lectures are to be held at the School of Art, Birmingham.

DEVON AND CORNWALL ARCHITECTURAL SOCIETY

The annual dinner of the Cornwall Architectural Society was held at Plymouth on November 2. Mr. B. Priestley Shires, F.R.I.B.A. (President) occupied the chair.

Sir Giles Gilbert Scott, P.R.I.B.A., responding to the toast of "The R.I.B.A." (proposed by Mr. W. J. M. Thomasson, F.R.I.B.A.), referred to a pamphlet on Elizabethan Plymouth, by Sir Philip Pilditch, with which he had been presented, and said he was delighted to hear that Plymouth had decided to recondition its historic areas rather than destroy and rebuild them. He hoped the precedent would be followed all over the country. He hated to see old historical architecture swept away when it could be reconditioned and made into beautiful and not unhealthful districts.

Other speakers included the Mayor of Plymouth (Alderman R. R. Oke); the Mayor of Exeter (Mr. Kenneth Gatey); Messrs. D. Priestley Shires and A. H. Ough, F.R.I.B.A.

CALTON GAOL SITE

A committee has been appointed to select an architect for the proposed Government buildings to be erected on the Calton Gaol site, Edinburgh. The Committee will consist of the following: The First Commissioner of Works, chairman (Right Hon. W. Ormsby-Gore); the Secretary of State for Scotland (Sir Godfrey Collins), the president of the R.I.B.A. (Sir Giles Gilbert Scott, R.A.), the president of the Royal Incorporation of Architects in Scotland (Mr. John Begg, F.R.I.B.A.), Sir D. Y. Cameron, representing the Royal Fine Art Commission for Scotland, and the chief architect of H.M. Office of Works.

HANTS. AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION

Lt.-Col. R. F. Gutteridge, F.R.I.B.A., in his presidential address to the Hants. and Isle of Wight Architectural Association at Winchester last week, said the architect of today must be a man of many parts. The successful man was the one who had the most orderly mind. No man could be a successful planner unless he was able to order his thoughts and at the same time see his building not only on the flat, but also by its cubical contents.

Among those present were the following: The Dean of Winchester, Professor Gleadowe, and Messrs. Ingalton Sanders, F.R.I.B.A. (Past President), and A. L. Roberts (hon. secretary).

PRESERVATION OF DURHAM CASTLE

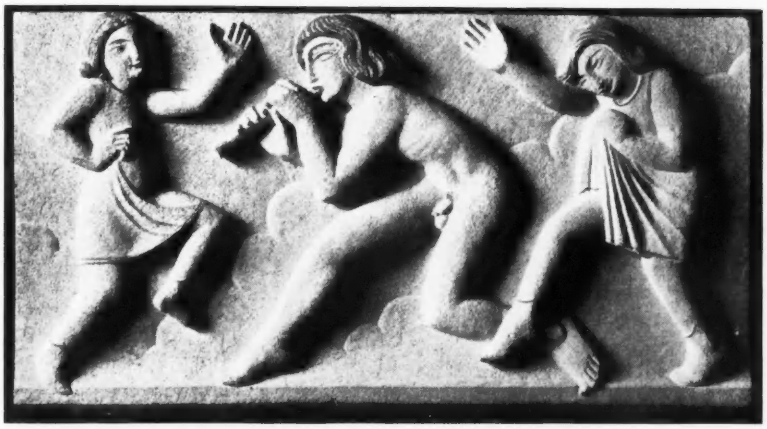
Sir Charles Peers, F.R.I.B.A., has been appointed consulting architect to the Durham Castle Preservation Fund.

A SHEFFIELD BEAUTY SPOT

A petition is being raised by the Rivelin Valley Protection Society (states *The Manchester Guardian*) formed by gardeners in the Malin Bridge district of Sheffield, protesting against building activities in the valley, a famous beauty spot, on land owned by the Sheffield Corporation Water Department. Already over 10,000 signatures have been received, some of them from places as far distant as London and Manchester.

BLACKPOOL AND FYLDE ARCHITECTURAL SOCIETY

At the thirteenth annual meeting of the above Society, held at Blackpool last week, the following officers were elected for the ensuing season: President, Mr. T. W. Fairbrother, L.R.I.B.A.; vice-presidents, Messrs. R. Anderton, A.R.I.B.A. and F. M. Wilding, L.R.I.B.A.; secretary and treasurer, Mr. F. W. Coope, F.S.A.A., A.C.I.S., of Messrs. T. Greenhalgh and Co., incorporated accountants; hon. auditor, Mr. Harold G. Waddington, A.R.I.B.A. Committee: Messrs. W. Wade, L.R.I.B.A.; F. T. Waddington, F.R.I.B.A.; B. Drummond, A.R.I.B.A.; R. B. Mather, and J. Crabtree, L.R.I.B.A.



The Piper: A carving in stone, by Eric Gill, now on exhibition at the French Gallery. The stone slab is 3 ins. thick, with a maximum relief of about 1 in.

CHANGE OF ADDRESS

Mr. J. Wrightson Bateson, A.R.I.B.A., A.R.C.I., has removed his office from 46 Bedford Row, W.C.1, to Hanover Chambers, 12 Buckingham Street, Strand, W.C.1. Telephone No.: Temple Bar 3070.

R. I. B. A.

PRESIDENTIAL ADDRESS

Sir Giles Gilbert Scott, P.R.I.B.A., in the course of his presidential address to the R.I.B.A. on Monday night, said:

I should feel happier about the future of architecture had the best ideas of Modernism been grafted upon the best traditions of the past, in other words, if Modernism had come by evolution rather than by revolution.

Like all sudden and extreme changes of human endeavour, it suffers at first from a certain shallowness and superficiality; it lacks quality, which I contend can only come by gradual evolution, but in spite of this it has brought a breath of fresh air into a somewhat fetid atmosphere, it has cleared away a lot of cobwebs, and its negative quality of utter simplicity is, I feel, a healthy reaction. Will it be given time to develop into something fine? Or will the restlessness of modern times view such a gradual development with impatience and switch off to something else before anything has been achieved? In the extreme expression of Modernism lies its greatest danger; the inevitable reaction will sweep it away.

I would say therefore that its extreme exponents are its greatest enemies. There is a lot of functional nonsense about extreme Modernism: though logical expression of materials is claimed as one of its fundamental principles, we nevertheless find that buildings are designed to look as if they were of reinforced concrete, even when they are nothing of the sort; cantilevers and large spans are adopted for obtaining striking effects when it would be more economical and easier to use some more ordinary arrangement. Long horizontal bands of glass with no apparent vertical supports are not functionalism or true expression of construction: the law of gravity being what it is, verticals cannot be eliminated, and this fact should be accepted and not artfully concealed for the sake of obtaining a striking effect. One of the methods adopted in factories for concealing the essential vertical supports is to put them back some feet from the walls and let them obstruct the floor space where it is best lighted and most valuable; the functionalist argument is that the columns have not been set back, but that the walls have been put forward on cantilevers, thereby increasing the floor area, but one wonders why the columns are not brought forward also, so as to prevent them obstructing this increased floor area.

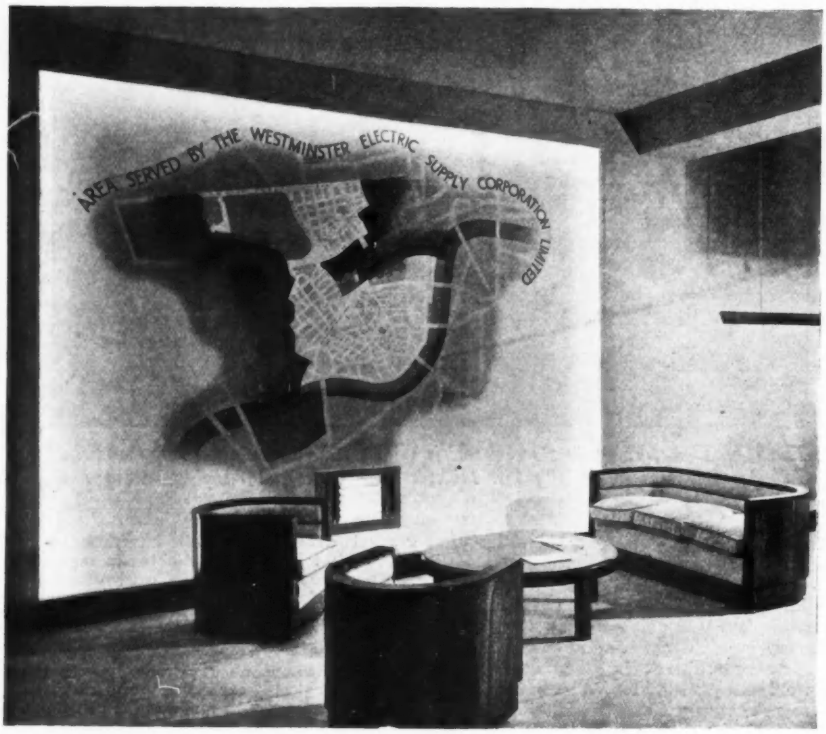
Modernist work demands a super finish, or machine finish, yet, owing to expense, this can rarely be afforded, and as a consequence, a great deal of this work has a shoddy character and as the newness and freshness wears off, takes on an appearance peculiarly dismal and depressing.

Still, it is easy to criticize and to pick out the more obvious weakness in this style, or lack of style, but nevertheless I think it would be a serious loss to architectural development if it were swept completely away in a violent reaction. I doubt if it could be so completely wiped out as to leave no trace of its influence behind. I want to see its best features and characteristics retained and grafted at first on to the traditions of the past, and then gradually developed not by a group but by all architects in the country, working together on the same lines.

THE GROWTH OF THE R.I.B.A.

The newly published *Kalendar* of the R.I.B.A. records an increase of membership during the last twelve months.

The Fellows have increased in number


AREA SERVED BY THE WESTMINSTER ELECTRIC SUPPLY CORPORATION LIMITED

In the reception room of the Westminster Electric Supply Corporation's Showrooms: The large scale map in colour of the company's supply area, designed by T. Lee-Elliot. The Showrooms, of which Adams, Thompson and Fry are the architects, are further illustrated on the facing and following two pages.

from 1,707 to 1,723, the Associates from 2,827 to 2,966. The Licentiates now number 2,397, and the total number of architects and students of architecture in the ranks of the R.I.B.A. and its allied and associated societies throughout the Empire has increased from 18,366 to 18,594.

The number of these allied and associated societies has in the centenary year of the R.I.B.A., reached a total of 100—64 in Great Britain and 36 in the Empire overseas.

REGULATIONS FOR THE CONDUCT OF ARCHITECTURAL COMPETITIONS

In accordance with the terms of Bye-law 38 the Council published in the *R.I.B.A. Journal* (September 9) for the comments or criticisms of members, the following revisions in the Regulations for the Conduct of Architectural Competitions, which were provisionally approved by them on June 12:—

(*a*) To add the following words to the first paragraph of Clause 1:—

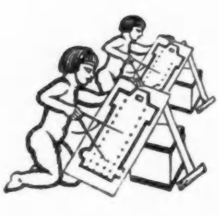
"The Promoters may, if thought desirable, appoint a representative to confer with the Assessor or Assessors during the progress of the Competition."

(*b*) To amend Clause 10 to read as follows:—

"In the case of limited or private competitions where the Royal Institute are satisfied that special circumstances may exist, modification of these Regulations may be approved by the Royal Institute."

The comments received were duly considered by the Council at their meeting on October 23, when the amendments were formally ratified.

COMPETITION NEWS



VENTNOR COMPETITION ABANDONED

The R.I.B.A. state that the Ventnor Urban District Council have now decided not to proceed further in the matter of holding a competition for the proposed Winter Gardens and Swimming Pool at Ventnor.

MANCHESTER COMPETITION

A competition for the purpose of selecting a panel of eight local architects to whom Manchester builders can apply for plans of small houses was announced last week by the Manchester Society of Architects. A builder making use of the panel will pay a fee of £5 or £6 for the first house, £8 or £9 for the first pair, and £1 10s. for repetitions. Competitors are asked to submit four designs. The assessors are Messrs. R. T. Longden, F.R.I.B.A.; G. Noel Hill, A.R.I.B.A. (City Architect), and J. B. Milner.

Competitions Open

December 4.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor: Thomas S. Tait, F.R.I.B.A. Premiums: £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1. The conditions were reviewed in our issue for September 28.

December 15.—Sending-in Day. Messrs. Jenson and Nicholson invite designs for the decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1.

No date.—Mr. J. P. Turner, J.P., of Cardiff, invites architects and town planners to submit designs for the lay-out of a building estate of about seven acres at Penylan Hill, Cardiff. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £100, £50 and £25. Conditions, etc., obtainable from E. Turner and Sons, Ltd. Penarth Road, Cardiff. Deposit £1 1s.

[*For Competitions pending see page 562 of last week's issue*—ED., *A.J.*]

OBITUARY

H. A. DANCEY

We regret to record the death of Mr. H. A. Dancey, L.R.I.B.A., of Gloucester.

Born in 1860, he was educated at a private school in Gloucester, later being articled to Messrs. Waller and Son, architects, of that city, with whom he remained as chief assistant for many years.

He started practice on his own account in Gloucester in 1897, and since then he had designed and carried out many important buildings in all parts of the district.

Mr. Andrew G. Maitland, F.R.I.B.A., of Edinburgh, left £10,138 (personal estate in Great Britain).

THIS ARSHETECTURE

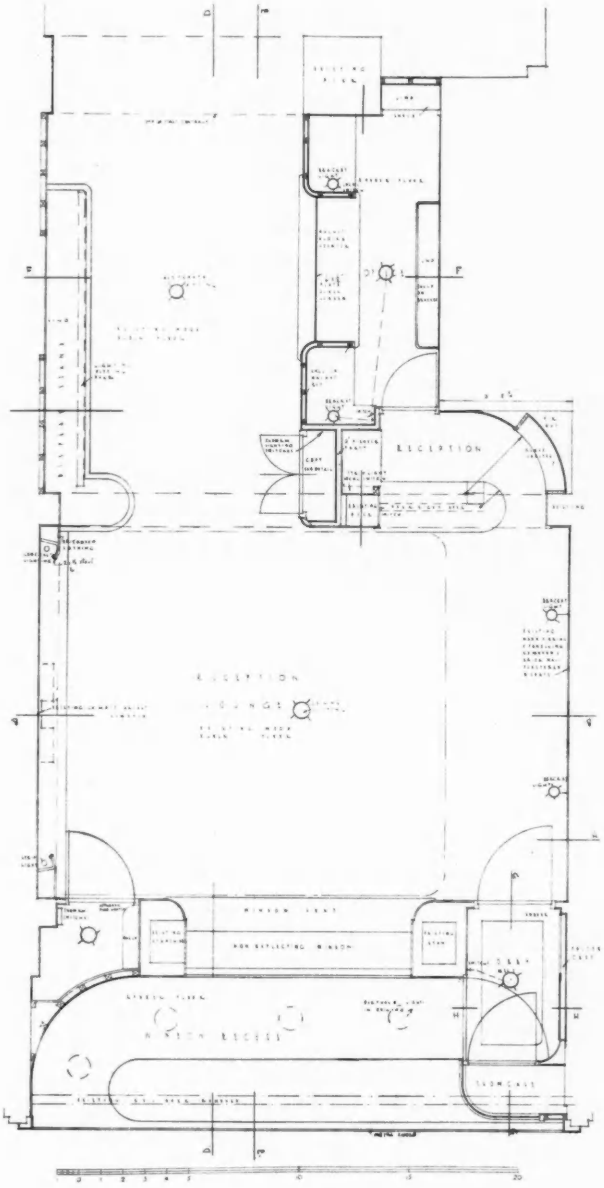
LIST OF GIFTS FOR XMAS "DRAW."

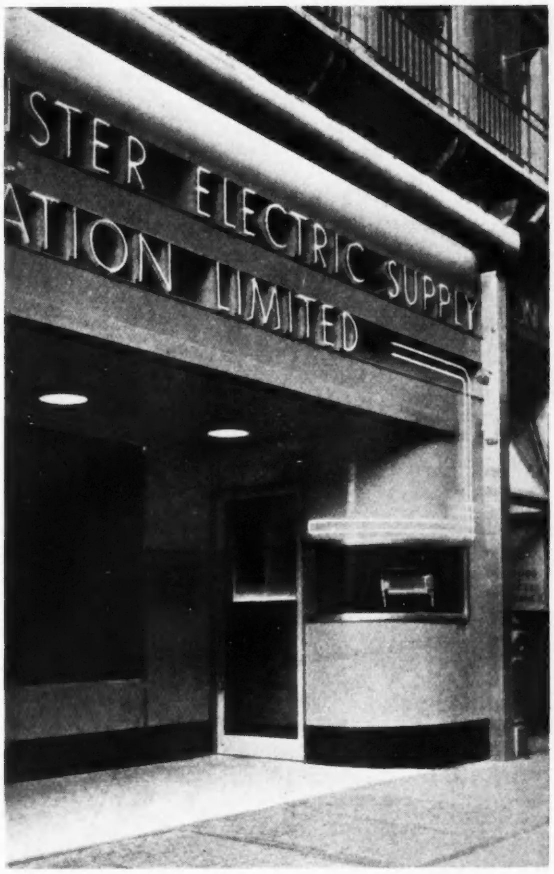
No. of Gift.

1309 Your Sketch Plans of a House will be set out to scale by a highly-qualified architect and sent to you with a note of what it should cost to build in your district, ; *or* a Guinea's worth of Fruit or Flowers.

Extract from this year's
Help Yourself Annual.

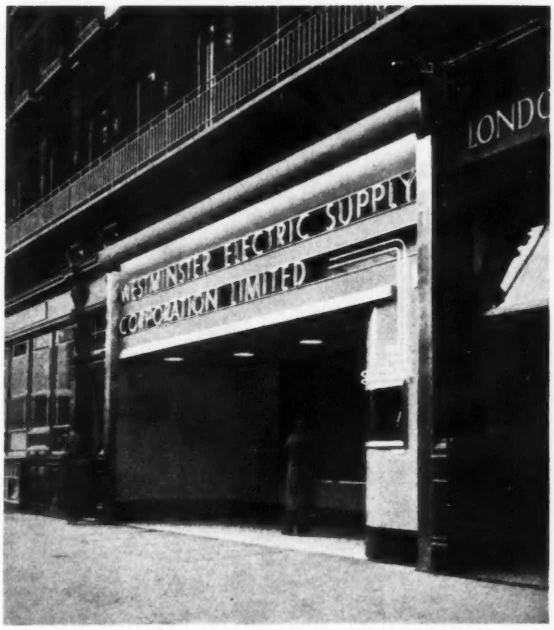
ELECTRICITY SHOWROOMS, VICTORIA STREET, S.W.


RECEPTION
RECEPTION LOUNGE
EXISTING WOOD BLOCK FLOOR
WINDOW SEAT
NON REFLECTING WINDOW
RUBBER FLOOR
WINDOW RECESS
SHOWCASE
0 1 2 3 4 5 10 15 20


STER ELECTRIC SUPPLY
ATION LIMITED

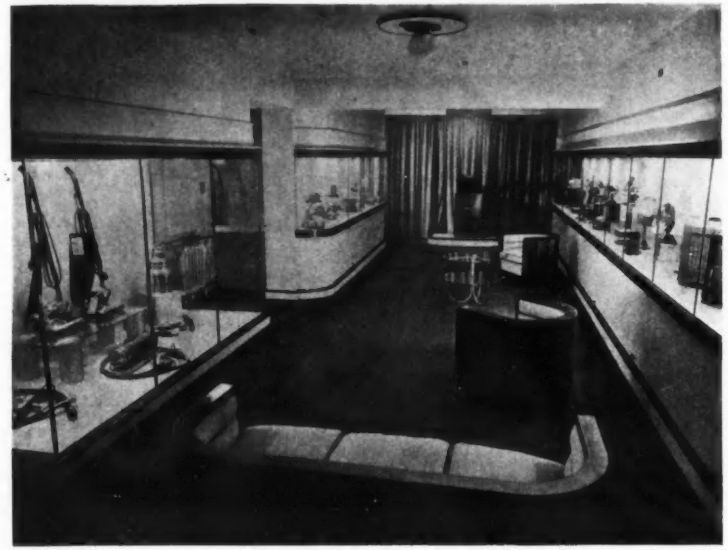
The ground floor plan and Victoria Street elevation of the Westminster Electric Supply Corporation's new showrooms. The shop front is faced with steel Plymax painted light yellow and grey, the framing members are of stainless steel, the skirting of black marble, and the floor of grey and yellow rubber. The lettering is in pale blue tube lighting, with the Westminster device in red.

The large window, of the recessed non-reflecting type, gives a clear view of the showroom and of the large scale coloured map of the area served by the company, which is painted on one of the walls of the reception lounge.

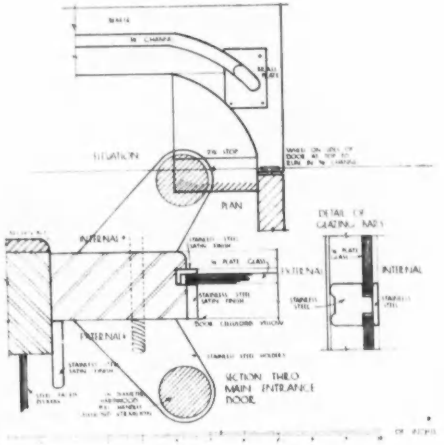

WESTMINSTER ELECTRIC SUPPLY
CORPORATION LIMITED
LONDO

BY ADAMS. THOMPSON AND FRY

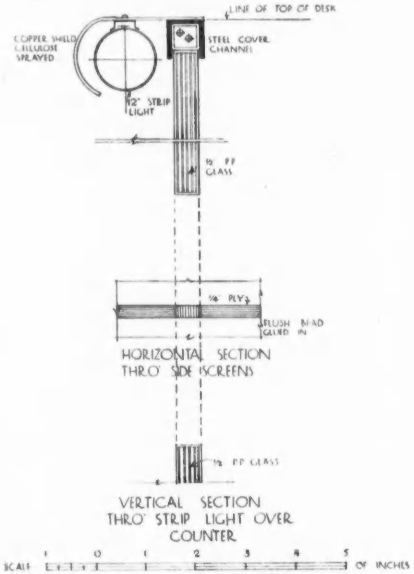
ELECTRICITY SHOWROOMS, VICTORIA STREET, S.W.

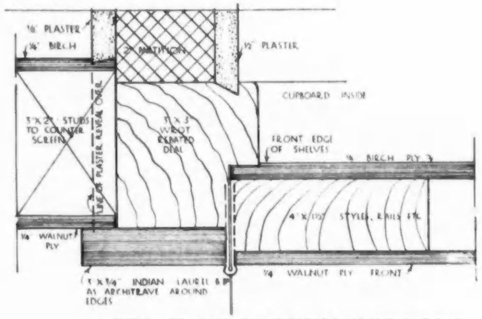


The first floor salesroom.

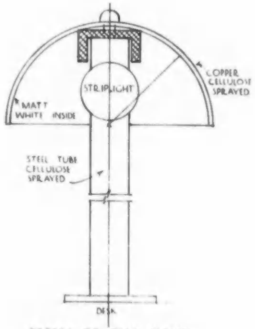

ELEVATION
PLAN
DETAIL OF GLAZING BARS
INTERNAL
EXTERNAL
PLATE GLASS
STAINLESS STEEL SATIN FINISH
STAINLESS STEEL
DOOR CELLULOSED YELLOW
STAINLESS STEEL HOLDERS
SECTION THRO MAIN ENTRANCE DOOR
SCALE
OF INCHES

The main entrance door, showing the recessed glass leaflet holder, details of which are below.


LINE OF TOP OF DESK
COPPER SHIELD CELLULOSE SPRAYED
STEEL COVER CHANNEL
½" STRIP LIGHT
½" PP GLASS
⅜" PLY
FLUSH BEAD GLUED IN
HORIZONTAL SECTION THRO' SIDE SCREENS
½" PP GLASS
VERTICAL SECTION THRO' STRIP LIGHT OVER COUNTER
SCALE 1 0 1 2 3 4 5 OF INCHES

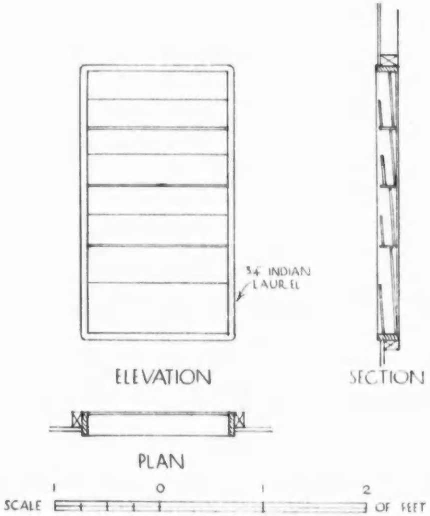

⅛" PLASTER
¼" BIRCH
2" PARTITION
½" PLASTER
CUPBOARD INSIDE
3"X2" STUDS TO COUNTER SCREEN
LINE OF PLASTER REVEAL OVER
3"X3" WROT REBATED DEAL
FRONT EDGE OF SHELVES
⅜ BIRCH PLY
4"X1½" STYLES, RAILS ETC
¼" WALNUT PLY
¼ WALNUT PLY FRONT
3"X¾" INDIAN LAUREL AS ARCHITRAVE AROUND EDGES

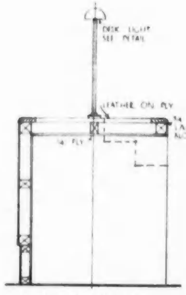
DETAIL OF BUILT-IN CUPBOARD FRAME & DOOR


STRIPLIGHT
COPPER CELLULOSE SPRAYED
MATT WHITE INSIDE
STEEL TUBE CELLULOSE SPRAYED
DESK

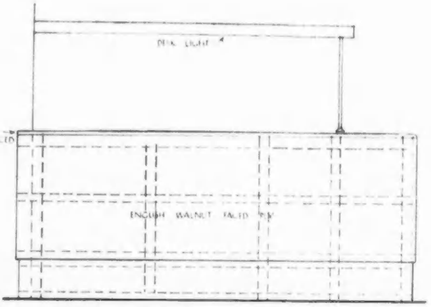
DETAILS OF DESK LIGHT

The first floor salesroom, shown above (left), has totally enclosed glass cases to preserve the metal work of the exhibits and to ensure adequate lighting for their highly polished surfaces. Beneath the glass cases are roomy storage cupboards, fronted in plywood and Indian laurel.

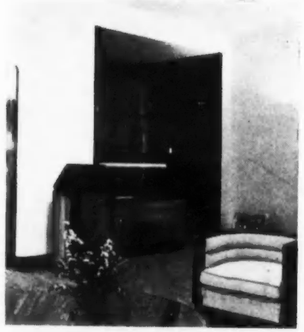

¾ INDIAN LAUREL
ELEVATION
SECTION
PLAN
SCALE 1 0 1 2 OF FEET

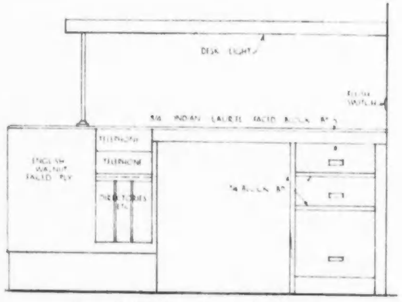

DESK LIGHT SEE DETAIL
LEATHER ON PLY
¾ INDIAN LAUREL FACED BLOCK B.
¾ PLY

CROSS SECTION

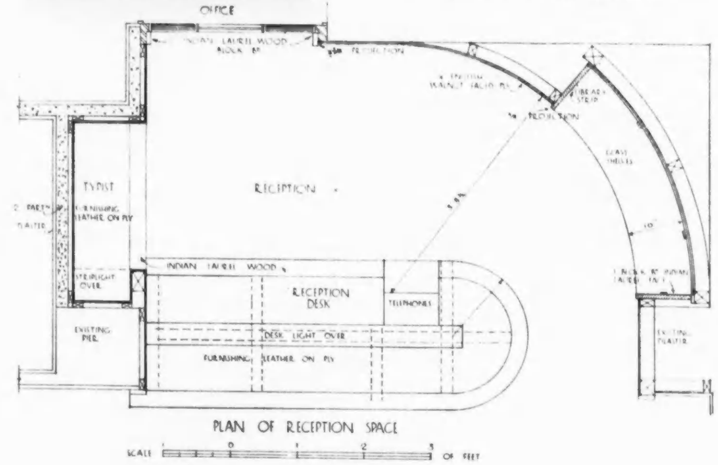

DESK LIGHT
ENGLISH WALNUT FACED PLY

FRONT ELEVATION TO RECEPTION DESK



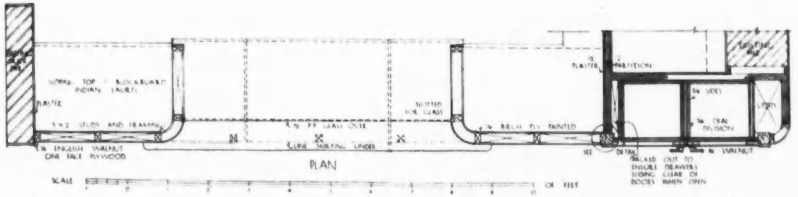

DESK LIGHT
¾ INDIAN LAUREL FACED BLOCK B.
FLUSH SWITCH
ENGLISH WALNUT FACED PLY
TELEPHONE
TELEPHONE
DIRECTORIES
¾ BLOCK B.

BACK ELEVATION TO RECEPTION DESK

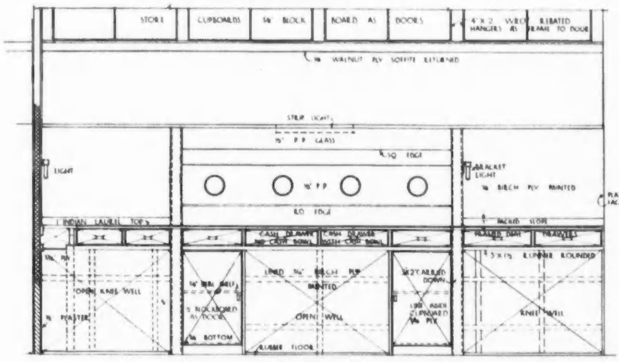

OFFICE
INDIAN LAUREL WOOD BLOCK B.
PROJECTION
ENGLISH WALNUT FACED PLY
BEAD STRIP
PROJECTION
GLASS SHELVES
TYPIST
FURNISHING LEATHER ON PLY
PARTN
PLASTER
RECEPTION
STRIPLIGHT OVER
INDIAN LAUREL WOOD
RECEPTION DESK
TELEPHONES
DESK LIGHT OVER
FURNISHING LEATHER ON PLY
EXISTING PIER
EXISTING PLASTER
BLOCK B. INDIAN LAUREL FACED
SCALE
0
1
2
3
OF FEET

PLAN OF RECEPTION SPACE

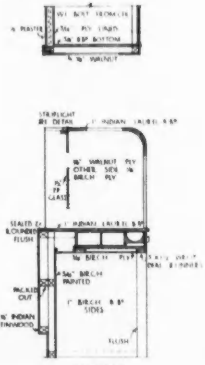
The reception desk is of plywood, faced with Indian laurel and English walnut. In the cashier's office English walnut, satinwood and Indian laurel are used for the wings, counter-front and skirtings, respectively. The counter screen, in two sections, is in polished plate glass with etched bands surrounding its circular conversation apertures. Details of the lighting fittings, and an enlarged detail of the built-in cupboard by the cashier's office, are shown on page 596.


SLOPING TOP 1" BLOCKBOARD INDIAN LAUREL
PLASTER
3 × 2 STUDS AND FRAMING
¾ ENGLISH WALNUT ONE FACE PLYWOOD
½ P.P. GLASS OVER
LINE SKIRTING UNDER
SLOTTED FOR GLASS
¾ BIRCH PLY PAINTED
PLASTER
PARTITION
¾ SIDES
¾ DEAL DIVISION
SEE DETAIL
PACKED OUT TO ENSURE DRAWERS SLIDING CLEAR OF DOORS WHEN OPEN
¾ WALNUT
SCALE
OF FEET

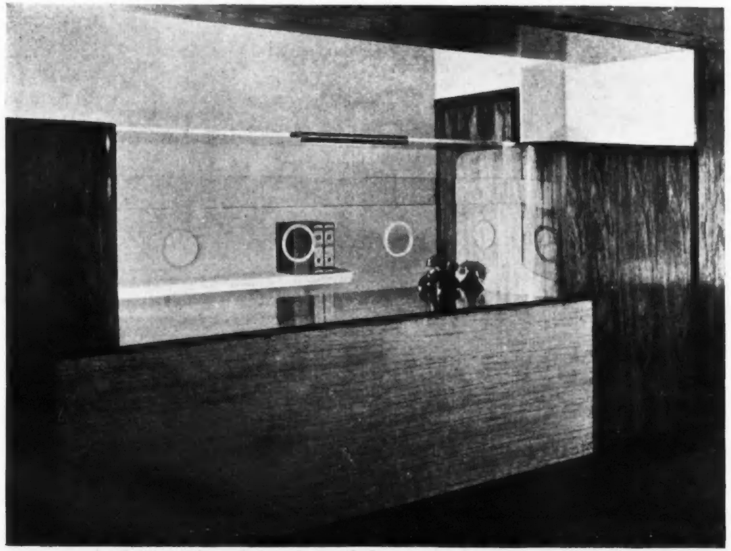
PLAN


STORE
CUPBOARDS
¾ BLOCK
BOARD AS
DOORS
4" × 2" WROT HANGERS AS
REBATED FRAME TO DOOR
¾ WALNUT PLY SOFFITE RETURNED
STRIP LIGHT
½" P.P. GLASS
SQ. EDGE
LIGHT
½" P.P.
BRACKET LIGHT
¾ BIRCH PLY PAINTED
PLASTER FACE
RD. EDGE
1" INDIAN LAUREL TOP
PACKED SLOPE
CASH DRAWER
CASH DRAWER
DRAWERS
¾ RUNNER ROUNDED
OPEN KNEE WELL
¾ PLASTER
¾ BLOCKBOARD AS DOOR
¾ BOTTOM
LINED ¾" BIRCH PLY PAINTED
OPEN WELL
RUBBER FLOOR
CARRIED DOWN
CUPBOARD ¾ PLY
KNEE WELL

BACK ELEVATION


W.I. BOLT FROM CIL
¾ PLASTER
3/16 PLY LINED
¾ B.B. BOTTOM
¾ WALNUT
STRIPLIGHT SEE DETAIL
1" INDIAN LAUREL B.B.
¾ WALNUT PLY OTHER SIDE ¾ BIRCH PLY
½" P.P. GLASS
SEALED & ROUNDED FLUSH
1" INDIAN LAUREL B.B.
¾ BIRCH PLY
DEAL RUNNERS
¾ BIRCH PAINTED
PACKED OUT
¾ INDIAN SATINWOOD
1" BIRCH B.B. SIDES
FLUSH

SECTION



A photograph and drawings of the counter in the cashier's office.

C

DESIGNED BY ADAMS, THOMPSON AND FRY

LETTERS FROM READERS

RAYMOND WALKER

A. H. DUNGAY

J. HOMERY FOLKES, A.R.I.B.A.

F. R. YERBURY, HON. A.R.I.B.A.

Registration

SIR,—I enclose a further letter bearing on the subject of my correspondence with the Registration Council.

Last Saturday I telephoned to the Secretary of the I.A.A.S., Major Athoe, as a member of the Council, hoping that he might be able to let me know when I might expect a reply: this is his answer.

R. Walker, Esq.

DEAR SIR,—You ask me if I, as a member of the Architects' Registration Council, have any knowledge of your correspondence being brought to the notice of the Council.

My reply is in the negative.

I have attended all the Council Meetings, and I have no knowledge of any instructions being given by the Council for your correspondence to be referred to a Committee.

G. B. J. ATHOE, SECRETARY
(INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS)

I have received Major Athoe's permission to send you the above letter.

RAYMOND WALKER

SIR,—Mr. Walker raises several important and intriguing points in his letters and I, as a registered Architect, shall be interested to read the replies thereto from the Registration Council.

It is strange that the Council should publish, and emphasize, that it has all necessary powers and yet, apparently, not be able to reply to such simple and fundamental queries as those raised by Mr. Walker. Surely delay is scarcely justifiable, and ought " consideration " of such matters to be necessary ?

A. H. DUNGAY

Architects' Standard Catalogue

SIR,—I am contemplating my trade catalogues. They are getting entirely out of hand. This is for several reasons.

1. They arrive more quickly than I or anyone in my office can make time to file them.
2. I am afraid to throw them away because I shall probably be looking for one of them next week.
3. I have not yet evolved a satisfactory method of " fool-proof " filing.
4. They are all sizes and shapes, making it difficult to file them satisfactorily.

I am beginning to wish that nothing new in the building world would be put on the market for five years, so that I could absorb some of the obviously wonderful materials, gadgets and what-nots which daily claim my attention.

It seems that the time has come for some action on the part of architects which will persuade manufacturers to either have standard sizes for their leaflets and catalogues or that an " Architects' Standard Catalogue " should be the only means of advertising permitted outside the Press.

If every architect decided that only firms advertising in a book of that kind should receive their enquiries there would soon be a state of peace and order. The " catalogues " might be made so that the very latest things could be interleaved or even a loose-leaf cover could be made to accompany it so that all new things (printed on the same sized paper) could be quickly put away and found again when required.

I have been told that something on these lines has been successfully achieved in America. Is there any reason why it should not be done in England ? Perhaps the manufacturers will have something to say on the matter. It is evident they suffer greatly from many architects who have acquired the habit of putting 99 per cent. of their advertisements post in the waste paper basket because they know if they were to keep them they might need a library and a librarian to keep it up to date.

I am really anxious to hear both sides of the question, for it is one entirely between architects and makers and sellers of building materials and fitments.

J. HOMERY FOLKES

Slum

SIR,—The following letter is typical of a number I have received as a result of the Building Centre Cottage Competition :—

DEAR SIR,—Would you be so kind to let me no who is the nearest place you are building those cottages I see in the Strand as I should like to rent one as want to get out of London as I have two rooms in these Building as they are not health as the are to many in them I think there are about 600 Familey in these Building so please let me no at your earlest as my baby is all ways beening ill so I would like to move out of them. I would like to have a cottage with four Rooms. I cannot buy it but I would rent one as so as you counld let me no as sone as you counld.

I do not want to get out of London to Far —say about 15 miles out would do me just nice.

I will now Close.

From

....

(London.)

This letter obviously proves that people living in slum areas who have seen the Building Centre Cottages would give almost anything to be able to live in something like them, or at any rate to move out of their present surroundings.

It is difficult, of course, to deal with cases of this kind, particularly as it would be distinctly uneconomical to build cottages of this type in the London district. On the other hand, you will be interested to know that we have evidence of at least 1,200 cottages being built in various parts of the country as a result of our Competition, but most of these are too far removed from London to be of any service to persons in similar circumstances to the author of the above letter.

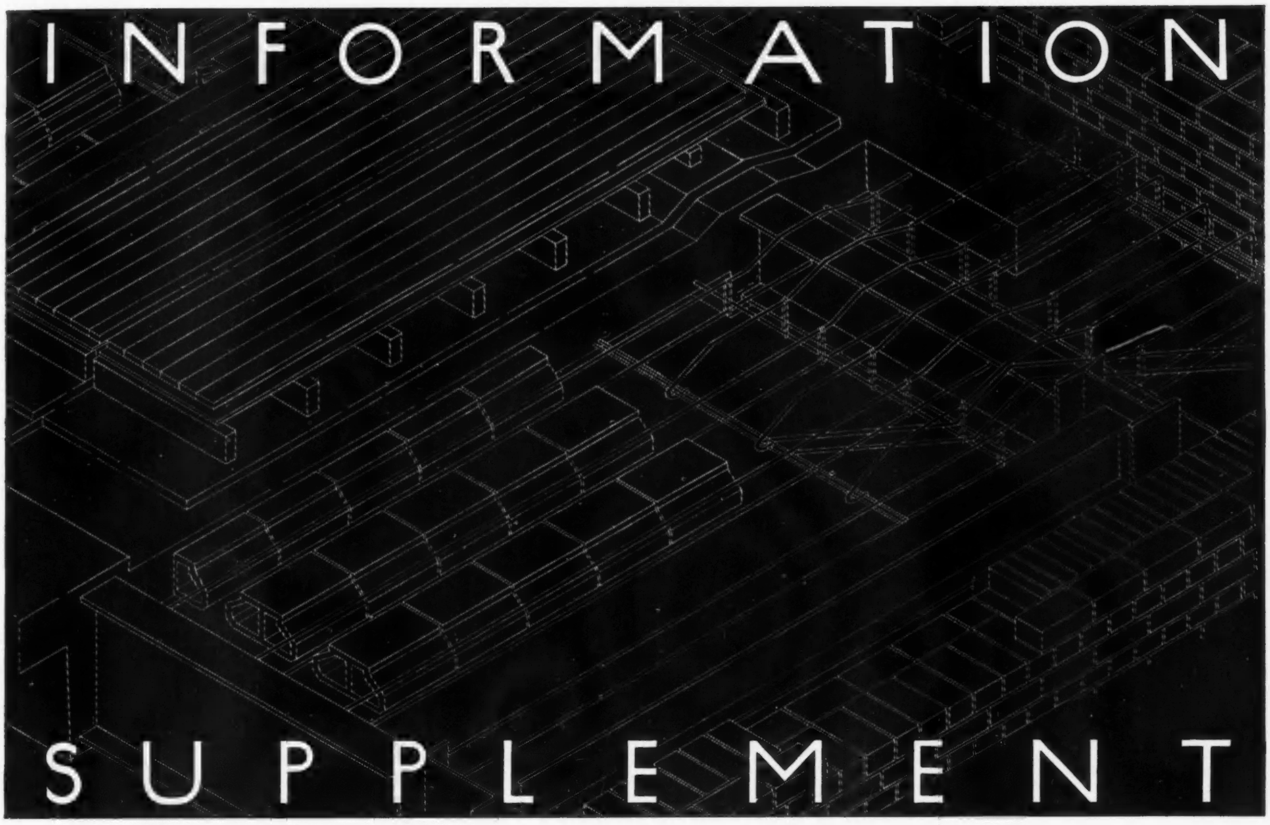
F. R. YERBURY

Liverpool Cathedral

Sir Giles Gilbert Scott, P.R.I.B.A., speaking at a meeting of the Committee of the Liverpool Cathedral last week, said that the portion now being built, costing £657,228, would contain the biggest Gothic vault in the world. It would be unlike that of any other cathedral.

The new section would double the size of the cathedral and more than double the seating capacity.

The present building operations, he said, were the " most exciting " since work began in 1901. There would be a series of exceedingly good sculptured figures by a local sculptor of outstanding ability. " Even though I am getting over the age of thrills," said Sir Giles, " I anticipate that the first view one will get, free of all scaffolding obstructions, will be an exciting moment."



INFORMATION SUPPLEMENT

THE MODERN KITCHEN

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See also Information Sheets

Information on building methods, materials and equipment is generally so widely scattered that the process of reference absorbs much valuable time. The Information Sheets, published every week, provide in accessible form the vital information on given subjects. It must be remembered, however, that whilst certain subjects may be treated diagramatically on a single sheet, others are better presented as illustrated articles. We therefore published, on July 13, the first of a series of Information Supplements. On that occasion we dealt with recent developments in structure; this, the second, is devoted to the requirements of the modern kitchen.

THE DOMESTIC KITCHEN

[*By* FREDERICK GIBBERD]

THE design of a kitchen should be approached with a scientific frame of mind, or in other words with a mercilessly analytical mind, that has the determination and ability to get at the naked facts and not to be influenced by prevalent notions and customary ideas.

The kitchen is quite the most important room in the house; in it the greatest activities take place, and on it rests the mental and bodily health of the entire household. It is imperative that it should run smoothly and efficiently, without any unnecessary labour. All its parts and materials require a most critical and intimate consideration, both in themselves and in their inter-relation; and only through accepting it frankly as a complicated piece of mechanism can this be achieved.

Part I

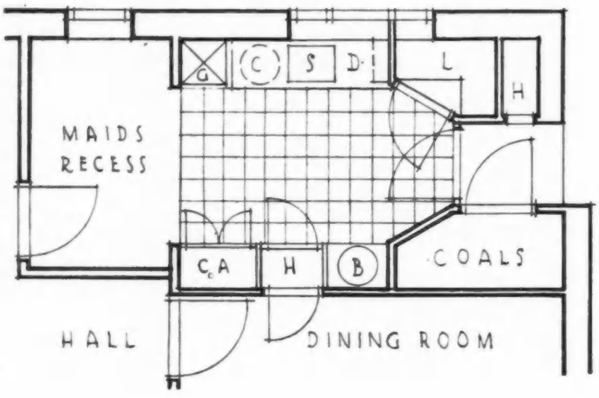
LAY-OUT

The starting point in designing a kitchen is, of course, the plan; the most exciting and ingenious labour-saving devices will in no way lighten the work if the lay-out is bad. The size and shape of the room naturally depend on the general plan of the house, but it should be borne in mind that spaciousness is not necessary, in fact it is often a definite drawback ; if the room is a small and compact unit the various operations will be concentrated together, and miles of walking will be saved.

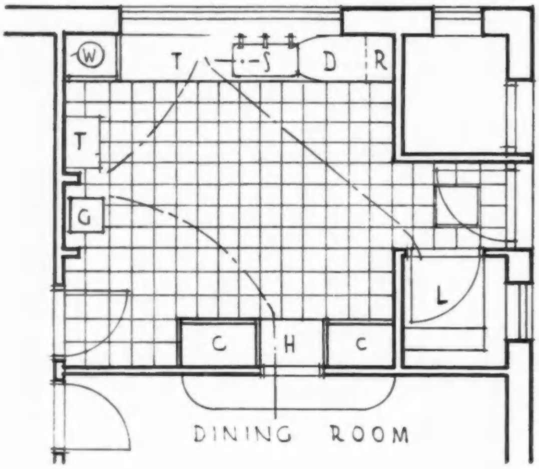
A separate room adjacent to the kitchen acting as a scullery is becoming obsolete, for it only interferes with the sequence of the tasks, makes for unnecessary journeyings, and heavy washing is nowadays sent out to a laundry. It will not be long before this unpleasant word, both in its sound, and all it stands for, is no longer associated with the house. There is one plea that is occasionally raised in favour of a scullery, namely, that if it is provided the kitchen will be pleasanter for the maid. Certainly if there is a resident maid there should be some place for her to sit in comfort when she is not working, and a portion of the kitchen could be set apart for this purpose. The winning designs in two recent small house competitions (plans A and D) both had maids' recesses arranged so that they in no way interfered with the continuity of the working operations, and in each case the assessors pointed out the desirability of the feature.

If the house is a large one (a "large house" nowadays is usually taken to mean one costing more than £1,500) a service pantry will be a most desirable adjunct to the kitchen. It will be, of course, situated between the kitchen and the dining-room and can be treated as a separate compartment (as in plan F), or merely as a part of the actual kitchen (as in plan E). The extra cost this room will incur will be amply repaid by the resulting amenities ; for, apart from insulating the dining-room from the noise and odours of the kitchen, it will simplify the preparation of meals for a large household by keeping the cutlery, glasses, and other furniture of the dining table away from the cooking activities of the kitchen.

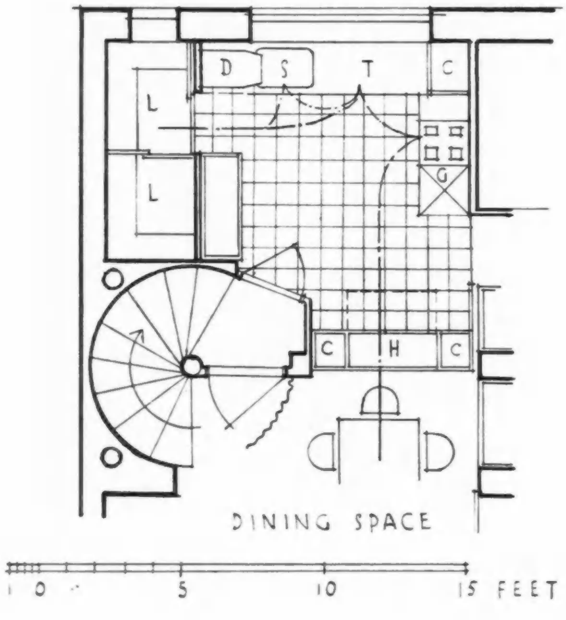
Doors take up space and can be most



A *The kitchen in the winning design for the "Daily Mail" Ideal House Competition, 1926. Part of the room is set apart for the leisure moments of the maid. Architect : Gordon Allen.*



B *The kitchen in a house at Coventry. The equipment is arranged in such a way that cooking operations take place in a continuous circulation round the room. An isometric view is shown in Fig. 11. Architect : Frederick Gibberd.*



C *A kitchen at Brünn, Czechoslovakia, designed on the same principle as the one above. See photographs 4 and 12. So smooth is the running that this approaches the ideal kitchen lay-out. Architect : Bohuslav Fuchs.*

irritating when in constant use; they should be cut down to a minimum both in number and size. Their positions will be dictated to a certain extent by the general planning, but care must be exercised to avoid cross draughts and draughts on to the cooker; the trades door is usually the chief offender and may well be separated from the kitchen by a lobby, which will reduce draught and prevent door swing from intruding into the working space. If the service is through a pantry, a swing door with kicking-plates is the most convenient type to operate when carrying a loaded tray.

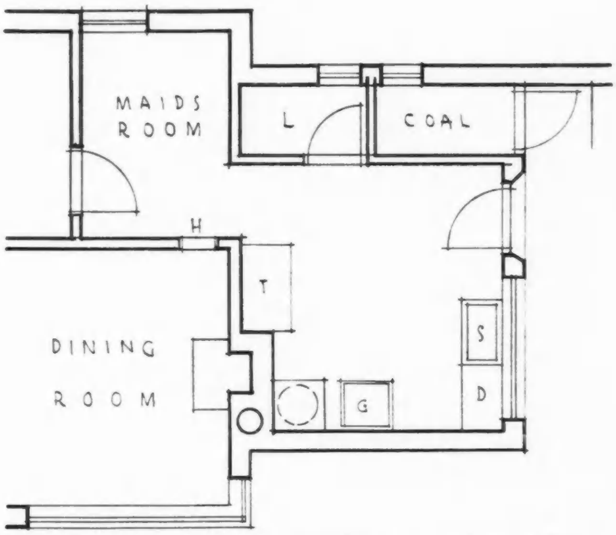
Aspect should be either North or East, as midday sun together with the heat of cooking is intolerable. Most textbooks state quite emphatically that North light is the best: a doubtful point, as a little sunlight first thing in the morning is likely to be very much appreciated by early risers.

It is imperative that the kitchen be flooded with light; the window will, therefore, be really large. The head of the window should be close to the ceiling to carry off the hot air that invariably collects there. Ventilation is of the utmost importance, so perhaps the ideal type of window to use is the steel variety, with fanlights at the top and sliding or opening-out casements underneath.

A point often overlooked is that any area of the wall in which a window occurs will be the darkest in the room; if the structure will not allow a large window it may be possible to arrange both North and East light which will respectively light the wall area around each window (see Figs. 1 and 2).

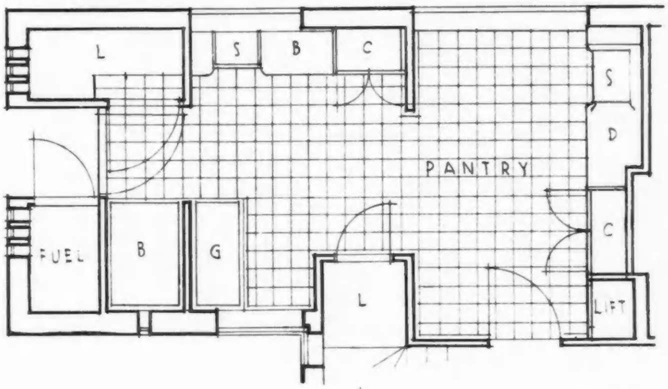
Having settled the preliminary requirements, the lay-out of the elements should be arranged so that the working operations take place with an easy sequence and continuity. The various units should be fixed to the walls at a constant working level, with as little space between them as possible, leaving the floor space clear.

Planning will naturally be restricted to a certain extent by the shell; for instance, the sink must be directly under a window and the cooker near to it, but some attempt



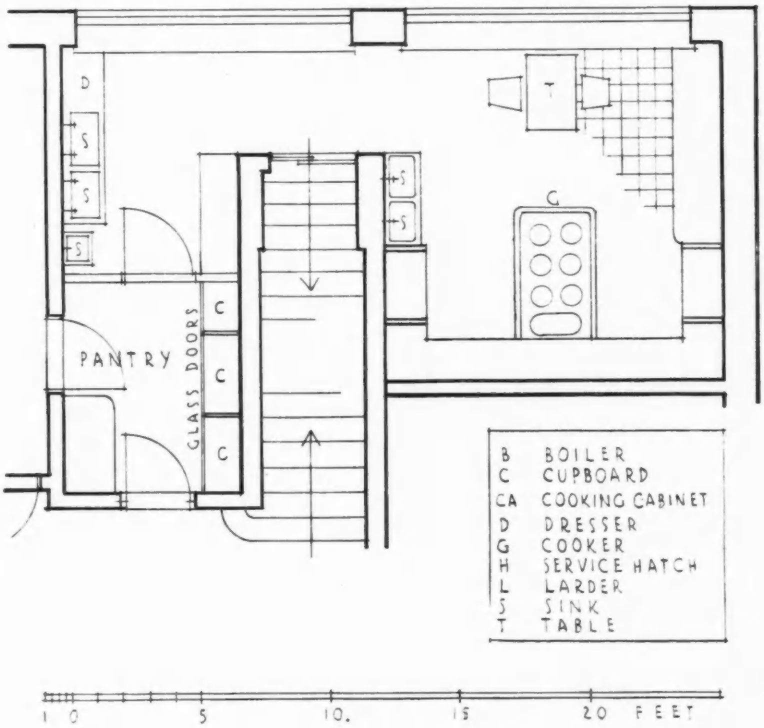
D

D *The kitchen in the winning design (type D) of the competition for Cement Houses, 1933. This illustrates a typical small-house (service) lay-out with maid's room. Architect: J. W. Davidson.*



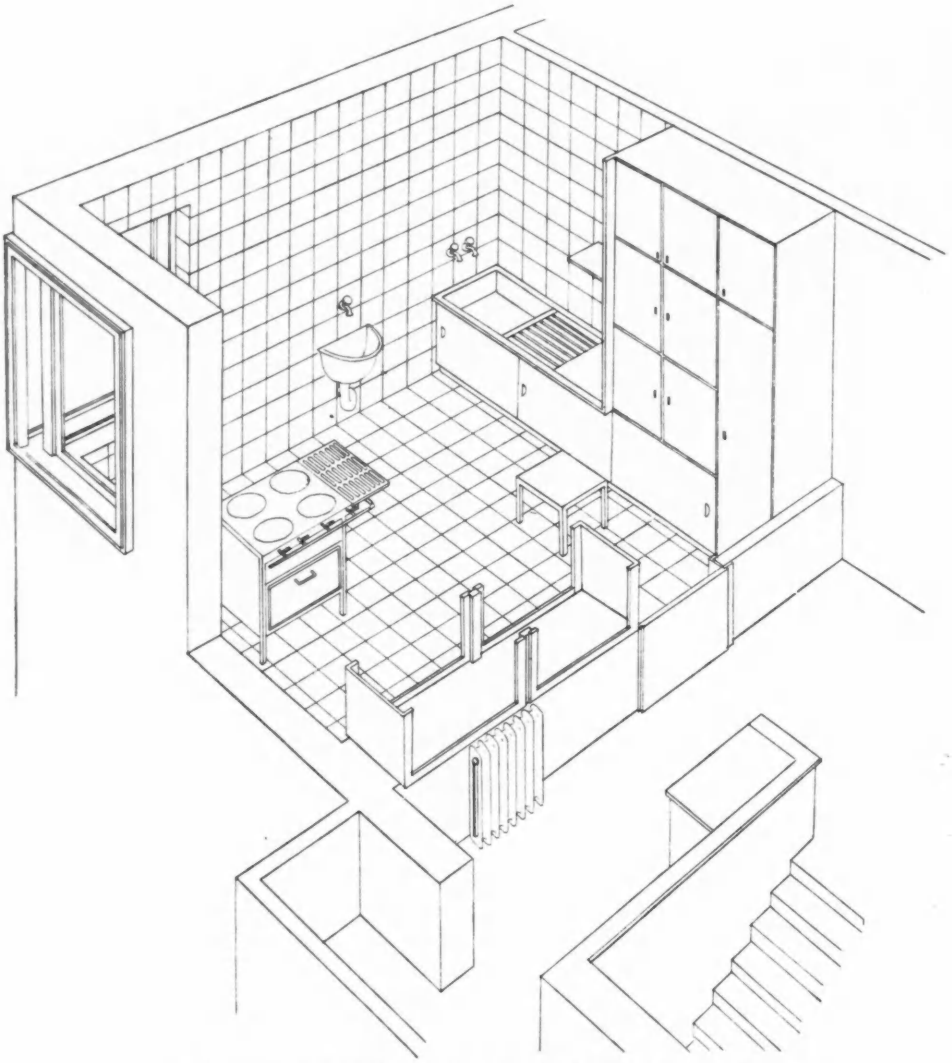
E

E *In a house at Amersham. Large space subdivided to form kitchen and pantry. Architect: A. D. Connell.*



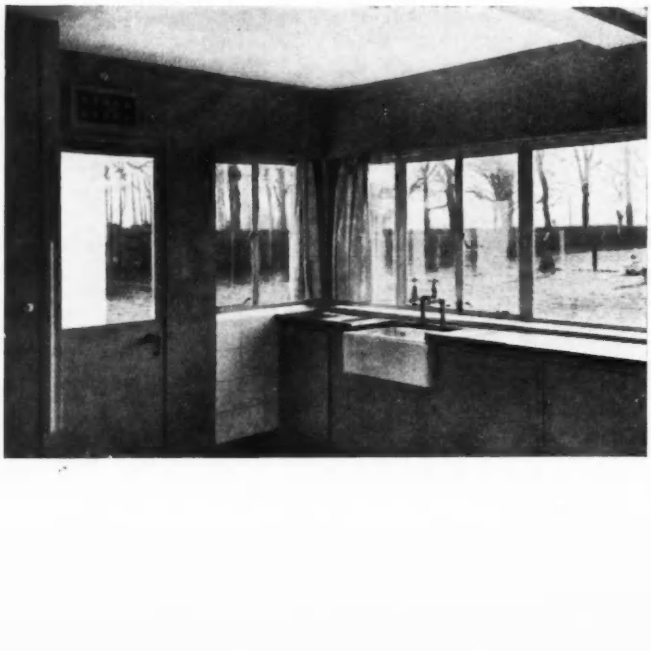
F

F *A kitchen in a large house near Berlin. The service is through the pantry. Architect: Erich Mendelsohn.*



1. *A house near Innsbruck. Architect : Lois Welzenbacher. The lay-out is not ideal, since the washing-up is done with the back to the window.*

Figures 1 *and* 2. *Examples of corner windows on North and East to light the dark wall areas that normally occur round an isolated window.*



2. *A house at Cambridge. Architect : George Checkley.*

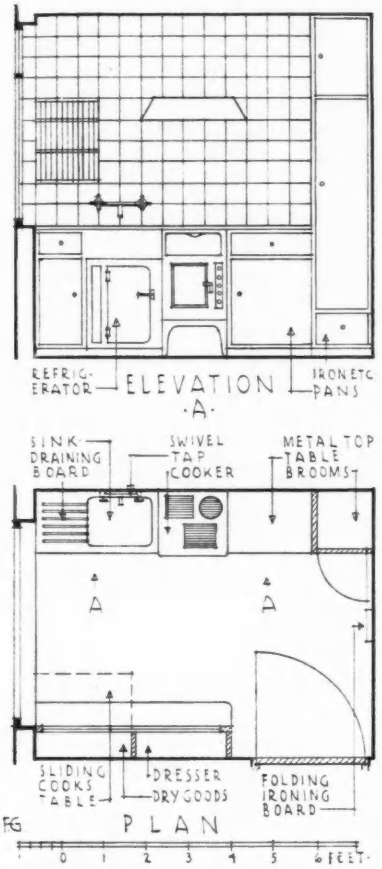


Figure 3. A typical small flat kitchenette with cooker, sink, and cook's table close to the window, and storage near the door.

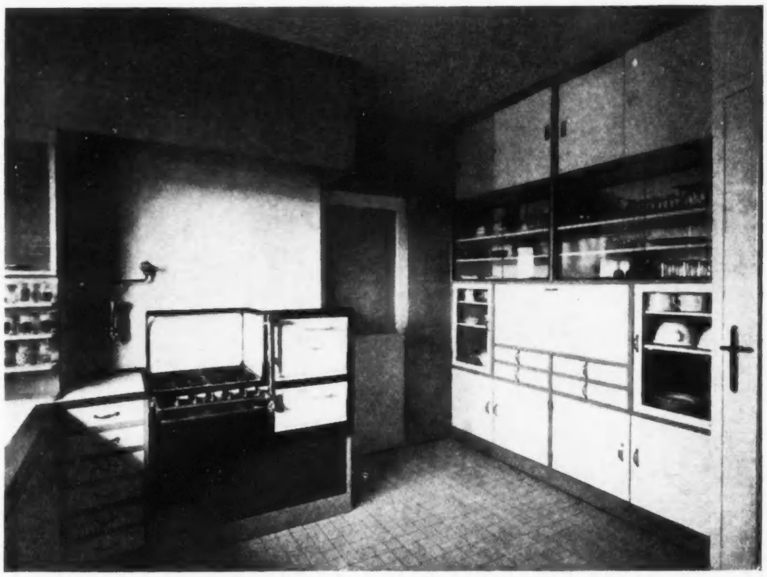


Figure 4. Kitchen at Brünn: Architect, Bohuslav Fuchs. A typical Continental gas cooker, raised from the ground to save stooping; the space underneath is equipped with a rolling shutter for pans. The hood above is connected to an extract fan.

should be made to plan the processes of work to follow one another round the room. In plans B and C the circulation is shown on the drawings; in each case the food is taken from the store L, prepared on the cook's table T, thence to the cooker G, and finally through the hatch H to the dining table.

THE KITCHENETTE

The planning of a small flat kitchenette is a special case presenting unusual difficulties, for, owing to the very high cost of land in those positions where flats are a good financial proposition, their area will have to be reduced to an absolute minimum. In many cases, too, the difficulty of obtaining a frontage will mean that the room will be narrow with the window on the short side. Economy of floor space should be effected by the use of such equipment as sliding doors, folding ironing board, and a cook's table which slides into the cooking cabinet, and other similar arrangements. Whenever possible, fittings should be built into the walls round the room, leaving a small floor area in the centre, for in this way the cook will have everything at arm's reach.

In Fig. 3 is shown a typical arrangement for a small flat kitchenette. The cooker, sink, and cook's table are close to the window, while the broom cupboard and dresser, as storage, are near the door, away from the light. A kitchenette such as this, in which all the available wall space is utilized for equipment, is rather costly. However, a big saving may be effected by having every lay-out identical with the fittings standardized.

A B.B.C. pamphlet issued recently on *Design in Modern Life* illustrated a kitchenette separated from the dining space by a curtain. This arrangement should not be resorted to for a sufficiently obvious reason that no one likes olfactory indications of what a meal is going to be, or, for that matter, what it has been.

An admirable kitchen was recently exhibited at Dorland Hall with a floor area, clear of fittings, of only 9 square feet.

In many ways the problem is similar to that which faces the designers of restaurant car kitchens. A study of the latest developments in this direction is worth while, as surprisingly compact lay-outs have been achieved. (An example is illustrated in Fig. 4a.)

Part II

EQUIPMENT

THE COOKER

There are several factors determining the type of cooker, such as the size of the household; the available fuel in the district; whether it is to supply hot water; and, usually the dominant agent, the pocket and personal whim of the owner.

Solid Fuel Burning Cookers.

There are many types on the market, from the cast-iron variety burning ordinary coal to

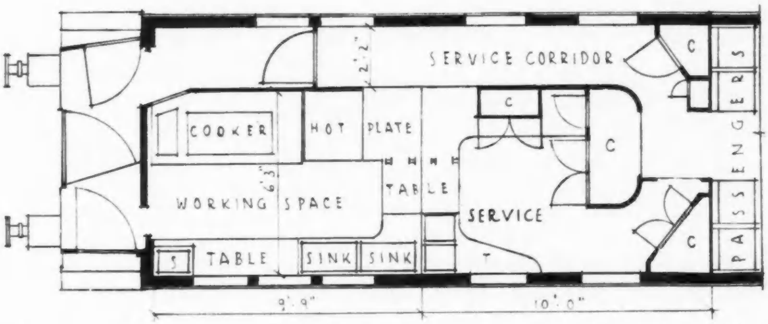
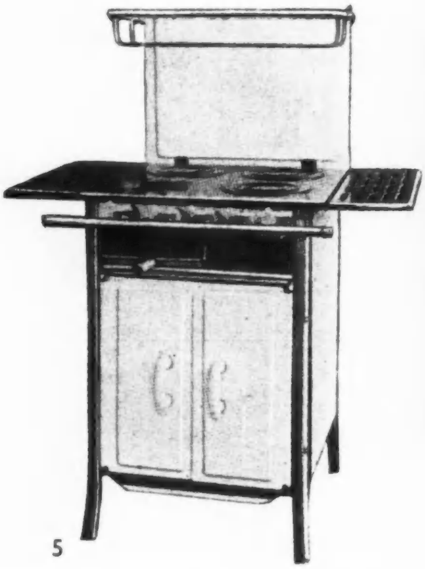


Figure 4a. A comparison with the kitchenette; a restaurant car kitchen in which a minimum space is exploited to give the maximum utility.



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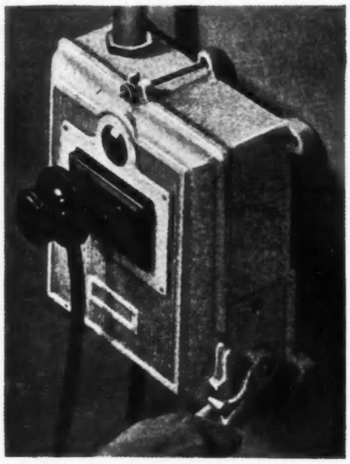

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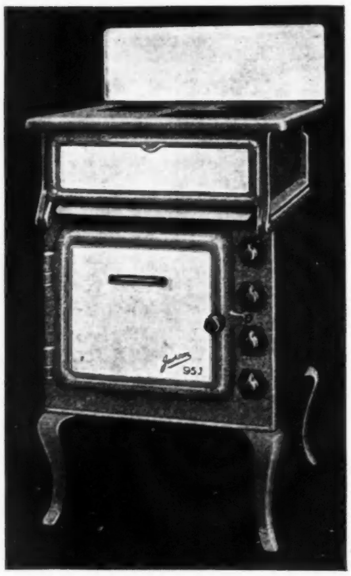


7

Figure 5. A contemporary vitreous enamelled gas cooker, quite divorced now from the coal range upon which gas cookers were originally modelled.
Figure 6. A cooker control unit to British standard specification.
Figure 7. A standard electric cooker. The hot plate, griller and oven are admirably designed, but why the cabriole legs?

asbestos-lined ones burning patent fuels. A particularly high standard of design has been reached in the latter. One make of anthracite cooker, designed by a Swedish Nobel Prize winner, is capable of cooking for as many as sixteen people and cannot consume more than 25 cwt. of fuel a year, burning night and day. In addition, it only requires refuelling once every 24 hours.

One of the major points to watch in the selection of an anthracite cooker is the insulating material. It is usually asbestos and must be very thick to ensure that the temperature in the oven is even, while the outside remains cool. In one of the kitchens in this year's Ideal Homes Exhibition, an anthracite cooker was placed side by side with a refrigerator, the top of the latter being used as a table; their rounded corners and dazzling white porcelain finish gave them a complete unity.

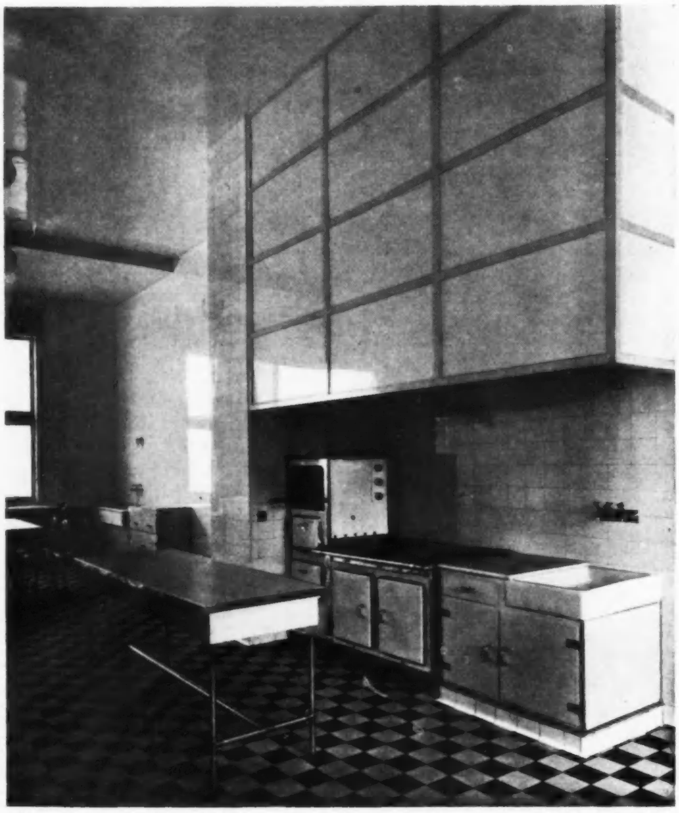


Figure 8. A luxury kitchen in a house near Paris. Architect: Mallet Stephens. Fumes are drawn from the kitchen by an extract fan in the hood.

Gas Cookers

A gas cooker has many advantages over a coal range. It can be immediately lit and extinguished; there is no possibility of varying temperatures; the heat can be regulated, making more accurate cooking; and above all the planning is greatly freed as no flue has to be provided.

Gas cookers have reached a very high standard indeed and are far removed from the first type which were very similar to coal ranges. The construction is usually of pressed sheet metal with rounded corners and vitreous enamel finish making cleaning very simple (see Fig. 5). The latest models are raised some distance from the ground in order that attention to the oven does not call for stooping. They are also fitted with controls which automatically maintain a set temperature, while one make has a cooler cooking zone at the bottom of the oven, so that dishes requiring different temperatures may be cooked together at one dial setting.

A hood connected to an extract might be placed over the gas cooker to clear off the fumes. The kitchen by Bohuslav Fuchs (Fig. 4) shows such an arrangement particularly neatly designed, while Mallet Stephens has made a feature of the hood in the kitchen, illustrated in Fig. 8.

Electric Cookers

Whereas the gas cooker is more efficient than one burning coal or patent fuel, the electric cooker has advantages over both. Its great virtue is that absolutely no combustion takes place. There are no fumes, the only ventilation required being for the exit of excessive steam. This means that it can be totally enclosed, the natural juices of the food being thus retained during cooking. Grilling, too, is more efficient because there are no flames to catch and burn the food in spots.

There is a technical article on electric cookers, I understand, elsewhere in this issue. The major points to look for in choosing one are that the heating elements are arranged so that they can be easily removed for cleaning, as a non-oxidizing element has not yet been invented ; and that the oven is well lagged and lined with rustless sheeting.

The shelves should be equipped with stops so that they will be safe when fully pulled out. Thermostats and indicating switches, while being in easily accessible and visible positions should not look stuck on, as they often do, but should be an integral part of the design. The cooker control unit should, of course, be to British standard specification. (See Figs. 6 and 7.)

THE SINK

It is worth reiterating that the sink should be flooded with light, for one still finds sinks that are not placed directly under a window. There are endless types on the market of all shapes and sizes, and of several different materials. An earthenware sink with white procelain finish is usually installed in the kitchen, but stainless steel and other metals (Fig. 10) have also been popular recently. In a service pantry the sink should be of teak (Fig. 9) as it is less likely to cause breakages to wine glasses and other fragile articles that are washed up in this room.

The sink should be deep enough to avoid splashing and should be fixed so that the bottom can be reached without stooping. If it can be afforded, a double sink is very advantageous, one side being used for washing and the other for rinsing. There should be a draining board on either side so that soiled crocks can be stacked on one side and then put through the sink on to the other.

It is possible to obtain the sink, draining board and swivel tap in one homogeneous unit (as in Fig. 12). There is certainly much to be said in favour of such a arrangement as it cuts out the awkward joint that otherwise nearly always occurs between the sink and the draining board, making rounded and streamlined forms possible.

TAPS

It is hardly necessary to mention that taps should be of a non-corroding material. Stainless metal is favoured in preference to porcelain, as the latter is apt to crack. The tap should be high to avoid breakages, and one of the best types to use is a swivel mixing variety, particularly if a double sink is installed.

If two separate bib cocks are used it is as well to place them wide apart leaving the centre of the sink clear from projections.

ARTIFICIAL LIGHT

Perfect kitchen light is one that is uniformly diffused and quite shadowless.

Indirect electric light is the best method of obtaining this but it is too costly for domestic work, and direct lighting will most likely have to be resorted to.

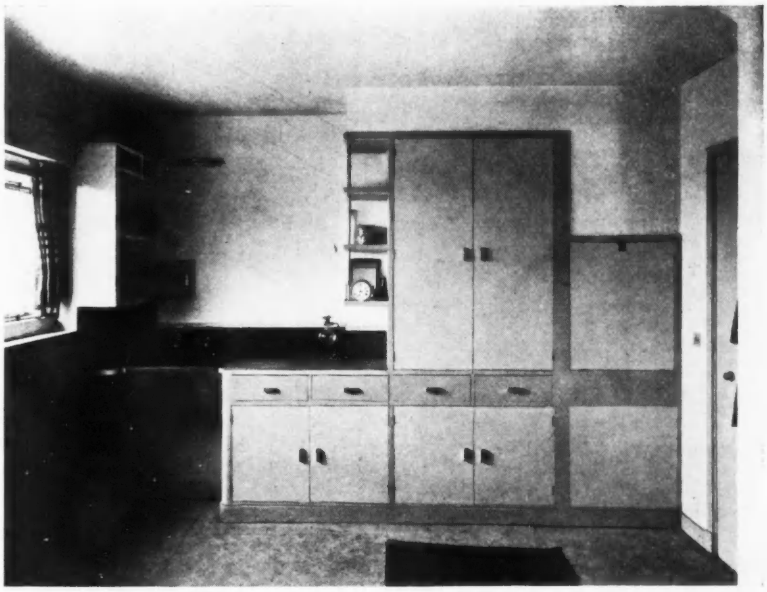


Figure 9. Pantry in a house at Amersham, with plate rack, teak sink and storage space designed as one unit. Architect : A. D. Connell. For plan see E on page 601.

Of the two types of direct lighting—the shaded and the exposed lamp—the shaded fitting is, of course, the better. There are on the market many types of fittings which have the bulb totally enclosed in opaque glass, and are quite watertight. It is advisable to use only the simplest of shapes, so that condensed moisture will not rest on them : in any case the fitting is for supplying light, and not for decoration.

MISCELLANEOUS EQUIPMENT

If the water in the district is hard it may be advisable to install a water softener. They vary from small portable devices to large units costing as much as £100. A useful size for dealing with a normal household is one that has a rate of flow of roughly 120 gallons per hour, costing about £30. The size will be about 4 ft. high by 1 ft. diameter, and a cupboard should be designed to house it, as dust soon collects on the pipes that seem to surround most softeners.

A washing-up machine might save labour in a large household, but in a small working kitchen it is likely, by its intricacy, to make work rather than save it. Washing-up machines have to be washed.

A towel rail or small radiator caged in wire mesh for drying cloths can take the

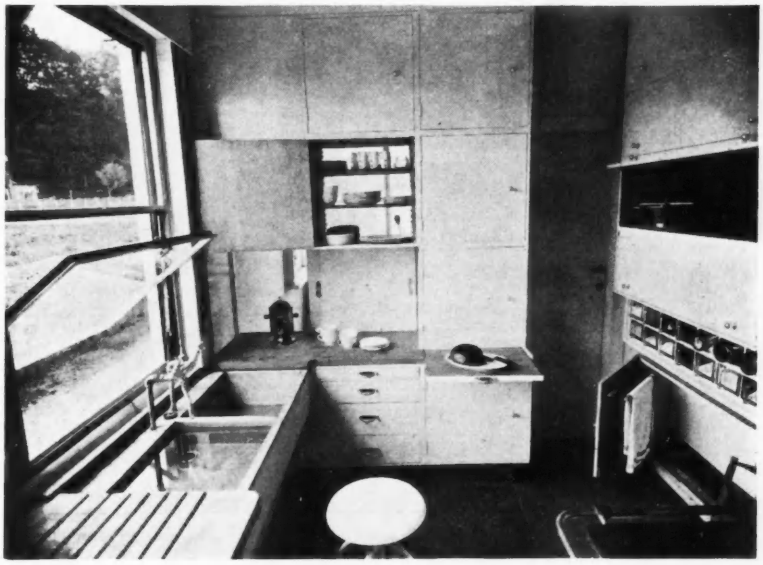


Figure 10. A house at Auderghem. Architect : L. H. de Koninck. Standardized kitchen cupboards. See note on page 613.

place of the long wooden "dryer" that was hauled up by a complicated system of ropes and pulleys to the ceiling of every Victorian kitchen.

Finally the equipment might include a synchronized electric clock, let into the wall so that steam cannot attack it.

Part III

STORAGE

STORAGE OF FOOD

The food storage can be roughly divided up into three sections :

1. Eminently perishable.
2. Perishable.
3. Non-perishable.

These sections will, of course, overlap to a certain extent, but if used as a basis, the organization of the planning will be simplified.

Eminently Perishable

Eminently perishable goods are such foods as meat, game, butter and milk, that must be kept at a lower than normal kitchen temperature to prevent the action of bacteria ; milk, for instance, has in it a resting bacteria called spores which can resist pasteurization, and if it is not kept at a low temperature these spores quickly become active, and even one drop of milk will swarm with microscopic germs.

The only possible place for the storage of these foods is in a refrigerator. Most modern flats are equipped with refrigerators, but they are not yet a standard fitting in the small house, possibly because there is still rather a tendency to look upon them as a luxury.

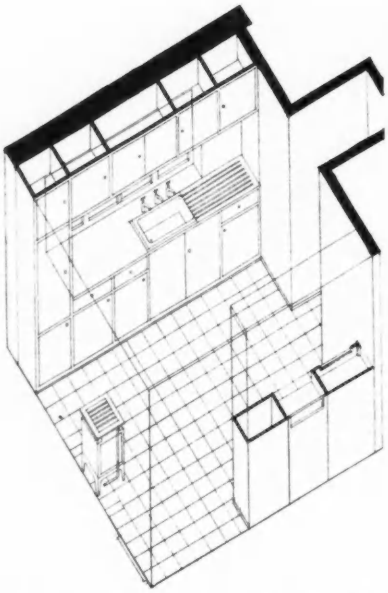


Figure 11. A house designed by Frederick Gibberd. In this example the wall cupboard provides ample storage space.

However, the refrigerator will one day be considered as essential a part of the kitchen as a sink ; and even now those manufacturers who have been enterprising enough to produce in large quantities have had sales beyond their wildest dreams.

A standard model suitable for a normal household can be bought for £35. At that price it should give a minimum food storage capacity of at least 4 c. ft. and a shelf area of 9 sq. ft. It should be capable of producing small ice cubes for cold drinks, and most makers will fit a salad humidor, which is well worth the extra cost it entails. The body is of pressed steel with corners rounded to prevent lodgment of dust and grease, with the interior finished in white vitreous porcelain. The external finish is normally white cellulose, but some makers supply with a priming coat only, so that the finish can be executed on the job to match the existing scheme.

Apart from refrigerators running from electric motors, there is one model that will run from oil, gas, or electricity, and has absolutely no movable parts at all.

Perishable Goods

This heading may be taken to mean foods such as bread, cakes and eggs, that will remain fresh for the fairly short time between their purchase and consumption ; and potatoes, greens, apples, and similar hardy fruits.

Perishable goods such as these are usually kept in a larder, but the refrigerator, and the desire to obtain a circulation of the processes round the kitchen, are tending, if not to make the larder obsolete, very much to reduce its size.

If planning will permit, the larder should have only one external wall, that being on the north. It should not be very deep ; for a small house the most usual size is

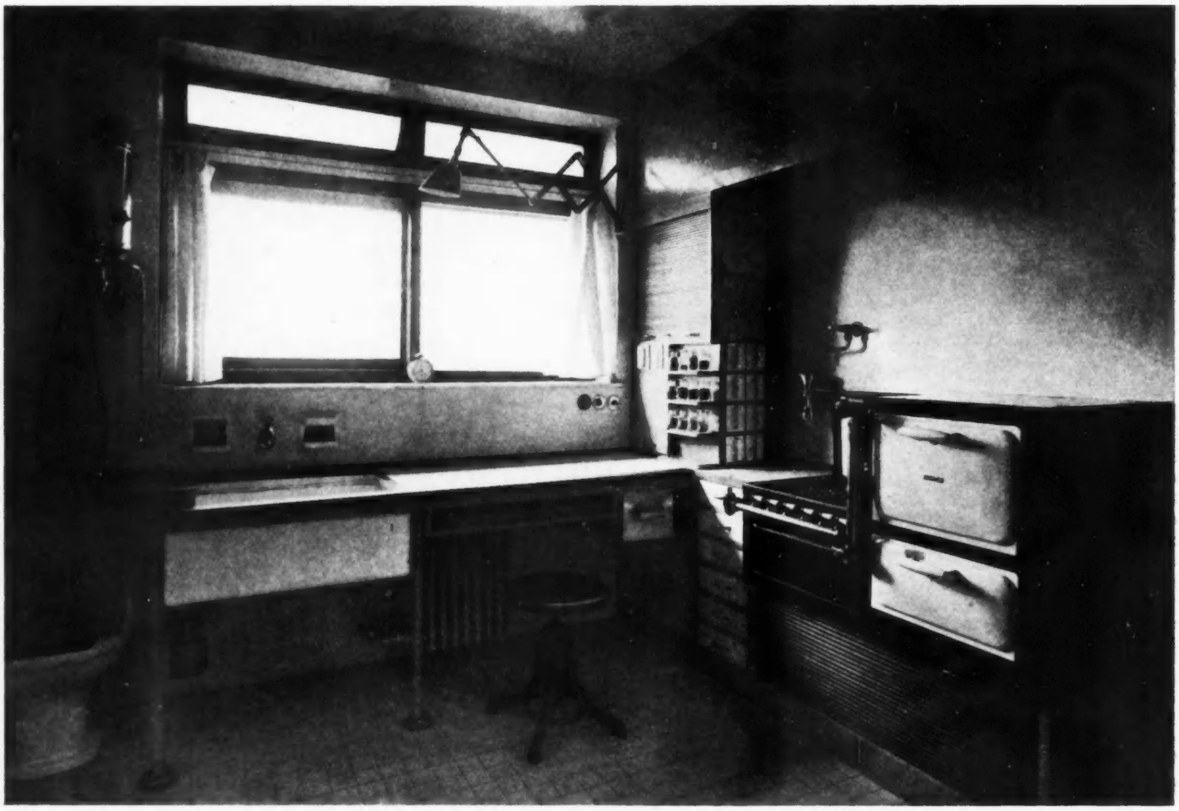


Figure 12. Another view of the kitchen, by Bohuslav Fuchs, illustrated on pages 600 and 603. The sliding pastry board under the cook's table and the metal drawers for dry foods are commendable features.

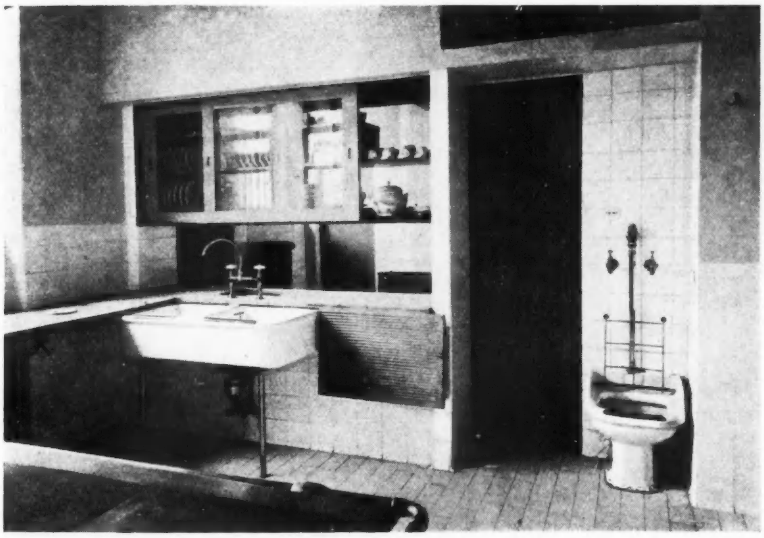


Figure 13. Kitchen in a house in Prague. Architect: Adolf Bens. Above the sink and hinged table is a service hatch to the dining room which is enclosed by sliding doors when not in use.

about 6 ft. by 3 ft. The window should be protected with a wire gauze to keep out insects—metal window manufacturers fit them as standard—and should be close to the ceiling so that the stale air can find an outlet. An air brick near the floor, also protected with gauze, will provide a circulation of air through the compartment. The practice of drilling the larder shelves to aid air circulation is not advisable, as a perforated surface is difficult to clean. Shelves kept at a distance of not less than 1 in. from the wall are all that is necessary. The equipment of the larder might include a slate or marble shelf near the floor for eminently perishable goods in the event of the larder being overcrowded. Near the floor, too, there should be wire racks for vegetables, with metal trays underneath to catch leaves and other droppings.

As mentioned before, the desire for a continuous circulation has meant that in most successful contemporary kitchens the larder has dissolved into various cupboards round the room. In this way we have a special cupboard for vegetables and fruits with metal racks and shelves, metal hopper cupboards for bread, metal drawers for cakes, and so on, depending on the food capacity of the family.

Non-Perishable

Non-perishable foods can, roughly speaking, be divided into two groups: (1) Preserves. (2) Dry goods.

Bottled fruits, jams, and other preserves that are put away for the winter can be stored in the cupboards near the ceiling, and in similar less accessible places.

Shallow shelves allow the contents of the cupboards to be immediately seen, thus helping the cook to take her stock in at a glance. The most common size of jam pot is the 2 lb., which has a height of 5 ins. and a diameter of 3 ins. Allowing for space between and the possibility of larger pots at the back, a two-pot shelf works out about 9 ins. deep. Besides these there should be some shelves 14 ins. apart for 3-lb. pots and tall fruit bottles.

Dry goods that are constantly in use during the preparation of meals must be adjacent to the cook's table. Some considerable ingenuity will have to be exercised in designing containers for this rather heterogeneous assortment. With care, highly successful results can be obtained, as may be gathered from the photograph of Bohuslav Fuchs' kitchen (Fig. 12). Note the porcelain enamelled metal drawers with sensibly large handles, and the sliding pastry board under the table.

If the trouble of designing special fittings such as these is not desired, a standard cook's cabinet might be installed. Some of these are full of intricate paraphernalia, and contain everything a cook could possibly desire, right down to a glass rolling-pin. Others consist only of a flour hopper and a few shelves holding a number of labelled bottles.

STORAGE OF TOOLS AND UTENSILS

The various kitchen utensils and tools are disposed about the kitchen near to the units with which they operate.

In this way saucepans, frying pans, and the like are kept on metal tubular racks, preferably in cupboards near to the cooker. Patent pyramidical saucepan racks are not advisable, as they get dusty, apart from encroaching on the floor space.

Drawers, too, for ladles, spoons, forks, rolling-pins, and other of the cook's tools are usually incorporated in the cook's table; while over the draining boards there will, of course, be a plate rack.

The dresser, like the larder, is ceasing to be a self-contained unit of the kitchen equipment and is merging into the general cupboard arrangement.

The practice of separating the kitchen from the living space by a wall consisting entirely of cupboards is very commendable as it effectively insulates the living space from kitchen noises. Part of the dresser should have sliding glass doors; it is a shame to hide away such cheery things as the tea and dinner services. Incidentally, the glass should be in one large sheet.

Bohuslav Fuchs has incorporated a service hatch into the cupboard wall of his kitchen (Fig. 4 and plan C). There is very much to be said for this arrangement, as it enables the crockery to be pushed straight through to the dining space, with absolutely no walking. Still more labour can be saved by arranging the cutlery drawers to pull out into both rooms. The usual objection raised against the hatch, that it allows the smell to permeate into the dining room, can be overcome by the use of double doors. Sliding doors are essential, as ordinary swing doors take up space and will sweep objects off the sideboard or folding table, which is usually placed under the hatch on the dining side. (See Fig 13.)

STORAGE OF CLEANING EQUIPMENT

The general cleaning apparatus of the house is often kept in the kitchen. Its position must be near the door to the living zone, where it is easily accessible without interfering with the kitchen circulation.

The minimum equipment consists of a cupboard at least 5 ft. high by 2 ft. wide to house the brooms and vacuum cleaner; smaller cupboards for polishes and shoe and window cleaning apparatus; drawers for string, paper bags, and other odds and ends; and cupboards near the ceiling for cardboard boxes, empty jam bottles and similar objects that are only wanted at long intervals.

Scrubbing brushes and pails are best kept in cupboards under the sink, as, being large objects, they are easily removed if the plumbing requires attention; while over the sink a container might be arranged for soap and swabs.

Part IV

MATERIALS

Not many years ago the kitchen was the darkest room in the house; now it is the lightest. Instead of chocolate brown and dark stone finish to hide the dirt, light colours are used so that the marks can be seen and instantly removed.

The kitchen is a small room; a feeling of space must be sought after by having as few different colours and textures in the finish as possible.

FLOOR FINISHES

The ideal floor finish is one that is non-absorbent, durable, non-slippery, easy to wash down and not tiring to walk on—a rather formidable list, and, as might be expected, it is almost impossible to find a material that has all these qualities.

CORK.—Cork has most of the qualities of an ideal kitchen floor. It is hygienic, warm and quiet to the tread, and is superior to oak for wear. Its great drawback is cost.

It is laid with waterproof mastic on a subfloor of evenly trowelled concrete.

RUBBER.—The admirable qualities of rubber are too well known to need description. Trouble sometimes occurs between the sub-floor and the rubber, as there is no actual mechanical joint. Rubber dissolved in coal-tar naphtha is the usual adhesive, and as it will not withstand damp, very great care will have to be taken in the laying. A manufacturer's guarantee should be obtained against creeping, bulging or perishing. The housewife should be warned against wax polish on a rubber floor, as turpentine is a solvent.

LINOLEUM.—Linoleum makes a good cheap kitchen floor finish. It must be of a strong quality to withstand scrubbing, and the cook should be warned that strong sodas and gritty cleansers will affect the colouring matter.

To nail linoleum down to a wood sub-floor is fatal. Damp will get between the two floors and rot will follow. If a wood sub-floor has to be used—that is, in those cases where a trowelled smooth concrete floor is in no way possible—the linoleum should be laid with mastic, and the joists well ventilated.

COMPOSITION.—A composition floor of magnesite to which is added sawdust, wood flour, and similar aggregates makes a splendid easy-going floor which is capable of taking a glossy polish. It has the additional advantage that it is an easy matter to form a cove skirting.

A magnesium oxychloride floor may fail if the proportion of the filler is too great, as there will be a large shrinkage on drying. In addition, where there is a large percentage of wood or similar filler, floor layers are apt to flood the sub-floor with magnesium oxychloride solution to control the suction. This solution can cause iron and steel to corrode, so pipes in the floor may be affected. In any case, service pipes emerging from the floor should be coated with lead paint or enclosed in sleeves. The concrete sub-floor must be quite dry, not too porous, and at least two weeks old before the composition floor is laid.

TILES.—Although eminently hygienic, tiles have the disadvantage of being noisy and rather tiring to walk on.

Some care should be exercised in setting out the joints to avoid unnecessary cutting, and to give an efficient appearance. An example of the careful setting out of floor tiles can be seen in Fig. 14, a kitchen by Miss Van de Rohe, in which the joints are dead central with the webs of the column. Incidentally, this is a particularly fine example of a modern kitchen. Nothing looks haphazard, everything is logically and deliberately interrelated.

WALLS

GLAZED TILES are an excellent wall finish that is becoming increasingly popular; so much so that most clients are disappointed if a few are not worked in somewhere, which accounts for the patchy appearance of many small kitchens.

Where expense is limited, the tiles can be carried up to a height of 4 ft., and finished with a rounded edge, the wall above being in hard plaster, enamelled.

ENAMELS AND PAINTS are very suitable, as the walls, ceiling and joinery can all be finished to the same colour and texture, giving unity and creating a feeling of space in the room.

Enamel should not be applied over white lead, as it causes it to turn yellow. A special zinc undercoating should be used.

Flat enamels and flat oil finishes have a lovely satin texture. The flat enamel is the most expensive. Some care will have to be exercised in application, as its composition is such that brushing is not easy. In addition, if the undercoat is not hard, dry flashing will occur; that is, glossy patches will appear.

When a varnish finish is used on paint it is imperative that the latter is absolutely flat and free from gloss to get complete adherence. If there is more than one coat of varnish the undercoat should be rubbed down with fine grain waterproof abrasive, or powdered pumice stone and water.

PLASTIC MATERIALS

The kitchen holds great possibilities for the use of the new plastic materials of the synthetic resin group. Their surfaces are in every way suitable, as they are hard, tough, homogeneous, and will resist heat and steam. Laminated resin paper, for example, makes a fine wall finish.

The urea-formaldehyde group might be used for table tops, while the phenol-formaldehyde group is equally suitable for door knobs, light switches and similar fittings.

HOTEL AND INSTITUTIONAL COOKING APPARATUS

[*By J. R. LEATHART*]

A WELL-DESIGNED and equipped kitchen suite of the size necessary for hotels and large institutions should ensure that the food, from the time it enters in its raw state to the time it is delivered cooked to the consumers, should pass in a regular, orderly and continuous manner through the various component units of the lay-out. The work of food reception, cleansing, preparation and cooking must be arranged in sequences, with no confusion, and the planning should create no unnecessary journeyings on the part of the kitchen staff.

The details of the general lay-out of the kitchen will vary in accordance with

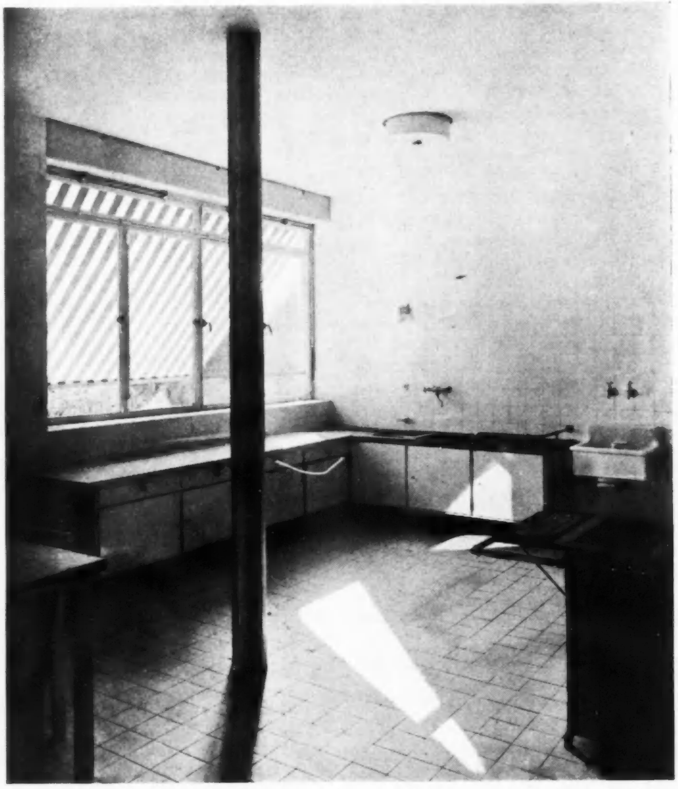
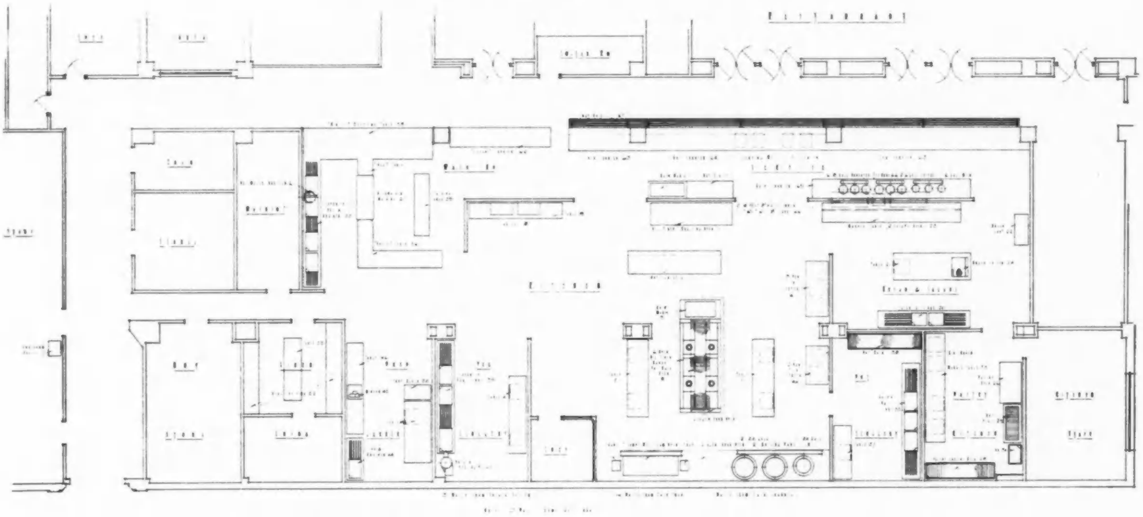


Figure 14. A kitchen in a house at Brünn. Architect: Miss Van der Rohe. The walls and floors are lined with white tiles.



Plan of the kitchen at Shell-Mex House, London. Architects : Messrs. Joseph.

the type and quantity of food to be prepared ; the requirements of the battleship obviously will differ from those of a hotel or a hospital, but the objects to be attained—good cooking, and quick and hot serving, are constant factors in each case.

The position of the kitchen in its relationship to the dining-room is an important one ; some engineers advocate downward serving with the kitchen above, so that cooking smells are not conveyed to the dining-room ; others prefer the kitchen below or on the same floor as the dining-room, but usually the exigencies of the general plan of the building dictate the position.

The usual American system, and one that is adopted in some English restaurants, is for a kitchen to be planned on each floor where food is to be served, located centrally and divided into two portions with the fittings duplicated in each compartment. Each half of the restaurant is served independently from its own kitchen. Speed of service is ensured by this system, although the cost of doubled equipment is necessarily high.

The arrangement of the servery in its juxtaposition to kitchen and dining-room is an important one. It is essential that the waiters can discharge the dirty crockery and make up fresh orders with a minimum of movement. The proper arrangement of " in " and " out " doors in relation to the counter can facilitate service expedition. Inattention to this detail invariably creates confusion. The servery should be fitted with a long carving counter with hot plates and closets, and with a *bain marie* at one end and vegetables at the other. A service counter for cold meats and sweets is required in addition.

The size of the kitchen itself depends upon the amount of equipment necessary for the needs of the building, but excessive space should be avoided as tending to create unnecessary movement by the staff ; it must be properly ventilated to clear the heat and cooking smells, but too much ventilation will tend to check the draught of the cooking ranges. Ventilation by artificial rather than by natural means is preferable so that the outlet for smells can be predetermined in the least objectionable position.

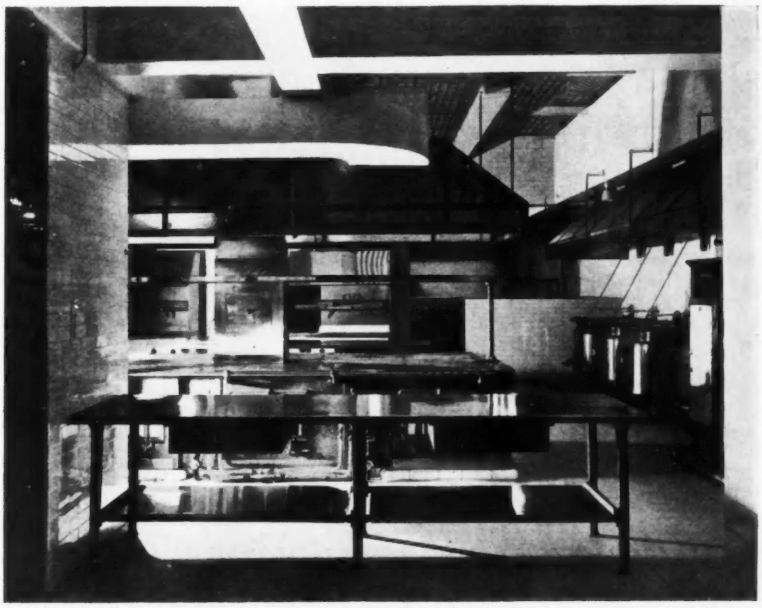
The kitchen should be planned as a central unit, and be in direct communication with the vegetable scullery, pastry room and pot and pan scullery. In addition, a meat larder, a fish larder, and a cold store room are necessary. The refrigerating plant is usually connected with the pastry room, still-room and wine dispensary.

Ample space, in a separate compartment near the reception end of the service counter, should be reserved for dish washing, and modern practice in this connection tends to displace hand labour by electrically-operated dish washing machines, which deliver the crockery hot and almost dry.

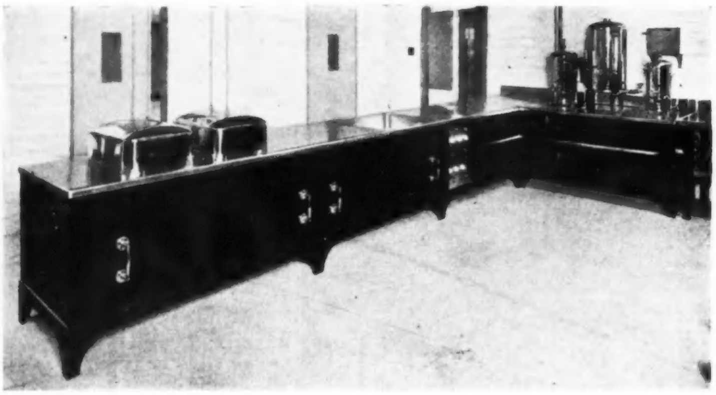
The meat larder should be equipped with hanging rails and hooks, marble shelving, white glazed earthenware sinks and a chopping-block ; the fish larder with rough ice tanks with sealed enclosures for the storage of wet and dry fish, white glazed sinks, marble shelving and work bench ; the vegetable scullery with a potato peeler, bins for storage, and earthenware sinks ; and the pastry room with marble shelving, metal-lined drawers and flour bins, and a motor-driven mixer with special choppers, mincers and bread crumblers.

The type of kitchen equipment depends upon the selected method of heating the ovens and boilers. Steam heating, coal and coke heating and gas heating are the usual alternatives. Electricity is too costly for general use except where current costs do not exceed ½d. a unit.

In institutions where steam is being generally used for heating, this can be utilized for the major portion of the cooking apparatus ; the production costs and the running costs of steam heating under these circumstances are low, and in many cases the source of heat can be reused by the process of condensation. Cooking and



Shell-Mex House. Architects : Messrs. Joseph. The kitchen, with glazed brick walls and non-slip tiled floor. Behind the stainless metal table, in the foreground, is the oil-fired cooking apparatus.



A serving table and still-room stand with stainless steel tops in a new London office building.

baking ovens, boiling pans for vegetables and soups, still-room apparatus, *bain maries*, porridge cookers, carving tables and cabinet hot closets, can all be steam-heated, and modern manufacturing development and improvement has placed at the disposal of architects and engineers a comprehensive range of most efficient apparatus from which to make selection.

Temperature control by steam heating is easy and flexible, and the simplicity of manipulation makes the system a popular one with the kitchen staff. As regards steam pressure, 3 lb. is all that is required for potato and pudding steamers, 10 lb. for hot closets, and a higher pressure still for the boiling pans and tea and coffee apparatus.

All the equipment previously detailed as steam-heated is manufactured for gas heating, and also for electricity.

In America the coal range has been almost entirely superseded in favour of gas ranges similar in general design.

English and Continental cooking still relies to a great extent on the coal range, although steam is increasing in favour as the most economical fuel for institutional cooking.

Grilling is best done on a coke grill with top ventilation into the chimney. Gas grilling is considered detrimental to the flavour of the meat, but charcoal grills, so largely in use on the Continent, enhance the succulent quality of chops and steaks in the opinion of those who make a hobby of eating.

The latest improvement in kitchen equipment is the use of metal for table tops; metal, as regards cleanliness, having a distinct advantage over wood.

As with all matters in building relating to engineering equipment, the architect is well advised to consult with kitchen equipment engineering firms in the early stages of his plans. His work will be simplified, and he will be spared the tedium of last-minute alterations.

ELECTRICITY IN THE KITCHEN

[*By LLEWELLYN WILLIAMS*]

MOST up-to-date houses are provided with electricity, but there still lingers an impression that it should be used in the kitchen only for lighting purposes. An electric iron or kettle is often looked upon as a great experiment, and an electric cooker as an expensive and complicated toy. As a matter of fact, an electric oven, once the general principle is mastered, is exceedingly simple and cheap, the average consumption being calculated at one unit of electricity per person per day in small establishments, and decreasing in proportion as the household becomes larger.

The architect should allow for three power points in all but the very smallest kitchenettes: one for the cooker, one for the refrigerator, and one for a small motor which can operate various labour-saving devices in the preparation of food. There is an initial saving in building an electric kitchen of the cost of the brick flue for the old-fashioned range, and no provision need be made for gas fumes or air vents, as the cooking is done in an hermetically sealed chamber. The absence of flues allows great freedom in placing the cooking apparatus; and in large institutions the cookers can be more easily isolated from the wall with space all round the hot plate, than in a case where flues are required.

One of the most important points in selecting an electric oven is the insulation lag, and an efficient model should bake the food without raising the temperature of the kitchen. A second point is the thermostatic control which economizes current and maintains a constant heat, and the third is the provision of a good quality ironclad double pole switch, preferably with a red warning lamp. As the principal safety device is the fuse, great care should be taken to see that the fuse box is fitted with the correct size fuse wire.

Electric ovens can be maintained at roasting temperature with about a quarter the energy required to reach that heat, and all switches to the cooker should have three heats—high, medium and low. An oven takes about twenty minutes to heat up, and should be kept on the "high" switch a few minutes after the food has been put in, and then reduced to a lower switch. Some ovens have a thermometer attached so that the cook can read the temperature and thus avoid opening the door during cooking operations.

As the electric oven retains its heat for a considerable time the current can be turned off before the food is done, and proper attention to this is an important economy. Most types of electric oven are square, and combined with griller and boiling top resemble in size and shape a gas cooker; but there is also on the market an oven shaped like a drum and insulated by means of aluminium foil, small enough to be placed on a table. A clock control can be set that automatically switches the current on and off at the time required, and cooking can then take place without any attention.

Electric grillers should have a range of adjustment between the food and the food holder, and one great benefit of electric grilling over other methods is that the elements clean themselves by burning off the grease that may fly on to them.

The boiling plate should be of stainless steel or monel metal, as these resist corrosion and reduce loss of heat by radiation. Even a good hot plate can be wasteful and inefficient unless there is an intimate contact between the plate and the utensil, and to get the best results the bases of saucepans should be ground flat and completely cover the boiling plate. The heating elements should not be exposed to the chance of anything boiling over on to them—milk, for instance, will turn to carbon and short circuit an exposed element. For boiling water the most efficient method is a kettle with an immersed element; for when it is boiled on the hot plate the element will remain hot long after the water has boiled and waste a certain amount of heat.

All elements should be of the "plug in" type, for, however good the cooker, these will not last for ever, and it is convenient to fit new ones easily.

Mr. A. C. Pallot, in his book on Equipment and Buildings, has made the following table of comparisons of the loading of electric apparatus:

Ovens	2½ cube feet	1·5 kilowatt
,,	6½ ,, ,,	6 kilowatts
Grill	75 sq. ins.	·8 kilowatt
,,	200 sq. ins.	2·5 kilowatts
Boiling	4 to 6 gallons	1·2 kilowatt
,,	10 to 20 gallons	3 to 3·5 kilowatts
Kettles	2 to 4 pints	·75 to ·9 kilowatt
Milk Warmers	2 to 4 pints	·5 to ·75 kilowatt

Electric refrigeration is an essential part of a modern electric kitchen, for since the addition of preservatives is forbidden by Act of Parliament in nearly all foodstuffs it is of the utmost importance that their storage should be in a place at all times below 50° F. in order to prevent the growth of harmful bacteria.

The principle of automatic refrigeration is briefly as follows: a refrigerant, often sulphur dioxide, is compressed to liquefaction and then allowed to expand and vaporize. The process of expansion draws heat from the air surrounding the expansion chamber, and if this takes place in an insulated cabinet, keeps it cool. The vapour then returns to the compressor and the process is repeated. The methods of obtaining this action differ with different makes of refrigerator. In most types the compressor is motor driven and is placed either below or above the cabinet, usually on spring suspension to reduce noise and vibration. For these nothing more is required than a power plug. Another type has no moving parts, and the cooling process is set in action by an electric heating element and a small stream of water. In this case a water meter will probably have to be installed by the water company, and a small waste pipe provided. A very small type without moving parts, but air cooled, is also on the market.

The different types seem to be all equally efficient, and the various sizes in which the cabinets are made enable them to be built in or fixed in any convenient position in the kitchen. The cost of running a refrigerator is about 1d. a day, averaging out the year, and as most models have thermostatic control the amount of current is automatically lessened in cooler weather.

Electricity has also reduced the drudgery of preparation of food, and the third power switch in the kitchen will run a small motor to which can be fitted attachments for meat chopping, vegetable slicing, coffee grinding, whipping, juice extracting and many other processes formerly done by hand. These attachments can be quickly slipped on and off the motor, and are tremendous time savers, as well as being aids to hygienic cookery.

The electric scullery, in small houses often combined with the kitchen, is really a separate consideration where the electric power is employed for the heating of water for general household purposes.

THE WORKING-CLASS KITCHEN

[*By JOHN DOWER*]

THE broad principles of labour-saving planning and equipment for domestic kitchens apply as forcibly to working-class as to any other houses. But the special requirements and limitations of working-class conditions justify a separate and additional consideration. It is almost universally acknowledged that the housing problem of today is the problem of providing a really large number of new cottages or flats which can be let at an average weekly rent of not more than 10s. (including rates) to the million or more of poverty-stricken people who are now crowded into the nation's slums and semi-slums. At least 100,000, probably 200,000, such new dwellings are needed annually for many years to come. More than two-thirds of all existing houses, more than three-quarters of all the houses likely to be built in the next 10 years, are working-class houses. Anything that can be done to make their equipment for cooking, washing and household management more efficient and less costly will be a national service on a vast scale.

LOW COSTS ESSENTIAL

In a general consideration of the domestic kitchen it is legitimate to subordinate capital costs and even running costs to the search for maximum convenience; for the *working-class* kitchen costs must be the first consideration. The capital cost of equipment forms a part of the rent and, whether it be reduced by a subsidy or not, every penny of the rent is a matter of importance. Every penny of the running costs—fuel, maintenance and the rental of any hired equipment—is equally important. The designer's objective is to see that at some given standard of provision the combination of capital and running costs expressed as a weekly charge is kept as low as possible. But in pursuing this objective he must keep in mind the ever present chance that a working-class housewife may exhaust her week's income before the end of the week; an all-electric or all-gas system dependent on a shilling or even a penny " in the slot " is useless if no money is available. It is broadly true that, while working-class families are very willing to lend and borrow small quantities of coal (and of food), they are loth to help each other or to ask for help with money loans. From this observed fact springs the common and wise provision in modern tenement buildings of a small oven in combination with the living room open fire as auxiliary to a gas or electric cooker.

At the higher income levels pennilessness need no longer be provided for; large numbers of better-off working-class families have saved or are saving sufficient money to *buy* a new house with generous mortgage assistance. In this case it is often necessary to face higher running costs in order that initial capital costs can be kept as low as possible; the renting rather than purchase of equipment may be essential, and the system that offers the widest renting facilities may have to be chosen irrespective of all-round economy.

PLANNING FOR THE COUNTRY COTTAGE

In some millions of existing working-class houses the kitchen as a separate entity can scarcely be said to exist at all. In such houses a single living room equipped with an old-fashioned range is used as sitting room, dining room, day nursery and kitchen, and often as bedroom too. Tens of thousands of these houses have no sink, perhaps no copper, and only a share of a common water supply in the yard. If no houses today are built with such primitive equipment, the tradition of the living-room kitchen dies hard. Except in the south of England, new houses of the type shown in Fig. 1 are still very common. The living-room is at the front of the house. At the back is a scullery or wash-house; here the sink, the copper, the mangle, spaces for food and coal storage and sometimes the bath under a hinged table-top, with just enough clear space to move about in; and here the dirtier work is done; but the housewife cooks and does most of her work in the living-room, and the open fire " kitchener " brought up-to-date is still the centre of operations. The system is definitely inefficient; the daily walking-circuit is far longer than necessary; the whole family lives in an overheated atmosphere and perpetual smell of food, surrounded by an untidy clutter of utensils. The only merit is a potential fuel economy; if the range be really efficient it can, at very low cost, produce all the heat necessary for both cooking, room-heating and hot water supply. In country districts where gas and electricity are not available, some such scheme of things is often inevitable. It has to be recognized that the family will tend to live in the room that has the fire and that one fire is more economical than two. The most ingenious solution is the back-to-back combination in which a single fire is open to the living room on one side while heating the oven and the boiler in the kitchen on the other; this is now widely in use and seems to work well

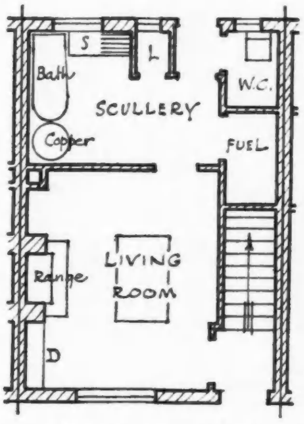


Fig. 1: Terrace cottage (d=dresser; l=larder; s=sink). For scale see Fig. 4.

and be popular. The winning design for the Building Centre cottage was equipped in this way in an excellent general arrangement (Fig. 2), though the dresser would have been better placed in the scullery. Alternatively an up-to-date closed boiler and cooker combination can be put in the kitchen and a separate open fire in the living room; this accepts two heating points but is not necessarily much more costly, for the fuel economy of the combination is greater in proportion as it has not got to do any room heating and the open fire can be disused in the summer months. Oil cooking merits serious consideration at least as a supplement to a living-room range. In any event an enlarged scullery-kitchen becomes the workroom of the house and everything except perhaps a part of the actual cooking is done in it. The bath is accommodated in a separate bathroom; a ventilated larder and, if possible, a dry-goods store are separated off as roomy cupboards. The sink under an ample window is the centre of operations with the cooker (whether oil or solid fuel) at one side and dresser at the other, and the solid-fuel copper well out of the way.

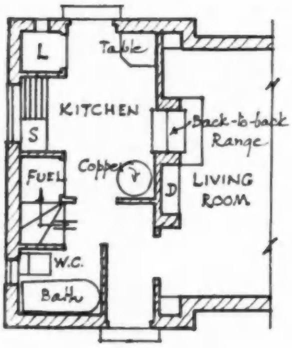


Fig. 2: Building Centre Cottage Architect: N. E. Leeson (d = dresser; l = larder; s = sink).

URBAN COTTAGES AND FLATS

Under urban conditions, where cheap gas or electricity or both are available, there is no longer any excuse for splitting the kitchen functions between living-room and scullery. It may be wise, as already pointed out, to combine an auxiliary oven with the living-room fire, but the gas or electric cooker for normal use and all other equipment should go into the scullery, now elevated to the rank of kitchen. Even where a parlour is provided (no longer in these days of minimums and economies so common as it used to be) both it and the living-room should be kept free of kitchen equipment; the least pressure of family growth will convert the parlour into a bedroom.

In the immediate future interest is concentrated on slum-clearance rehousing which, especially in London, must be mainly if not entirely in multi-storey tenement flats. The flat is at present more costly than the house of equivalent size and space has to be reduced to a minimum. In the kitchen, about which the whole plan turns, every inch counts; but it is definitely a false economy to cut the space too low; 7 ft. 6 ins. by 9 ft. is none too large. The current L.C.C. practice (under economy pressure) is to put the bath in the kitchen; though their kitchens are otherwise admirably planned this seems to me a definitely retrograde step. The labourer returning dirty from his work in the evening wants the room to bath in, just when his wife or daughter wants it to prepare the evening meal (see Fig. 3 for typical arrangement). If the bathroom must be combined with some other provision, it is better to put the w.c. into it (Fig. 4); a washhand-basin in addition is desirable, but generally regarded as unnecessary for subsidized and other minimum dwellings.

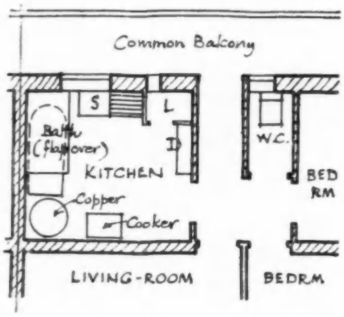


Fig. 3: Tenement flat, with bath in kitchen (L.C.C.).

GAS OR ELECTRICITY

Whether gas or electricity is in general preferable for cooking, hot-water supply and the heating of bedrooms is an acutely controversial matter. Most architects look forward to the day when the controversy will be settled in favour of the all-electric dwelling. Meantime their only sound course is a laborious and thorough-going examination of estimated costs for every scheme. The gas and electric companies are often in fierce competition, and one or both may be found willing to instal the capital equipment without charge; comparison, on running costs only, seems to show that in London electricity must be supplied at ½d. per unit (plus total fixed charges for maintenance, etc., not exceeding 10s. per annum per flat) before it comes down to equality with gas.

For large colonies of flats a central hot-water supply should also be examined, and for very large colonies central room-heating as well. It is very doubtful, however, whether such central provision can be made economic (whatever the system—coke or oil-fired boilers, steam or water circulation, or thermal storage from off-hour electricity), unless it can be combined with profit-making laundries and baths at the source of supply. In any case central supply is unpopular with tenants, who have to pay for it by a fixed addition to their rent (not less than 2s. for hot-water alone, in any of the schemes I have examined), irrespective of the extent to which they use it; they very naturally prefer a self-contained equipment in their flat which they pay for according to use.

A TYPICAL FLAT ARRANGEMENT

Limiting consideration to self-contained equipment, it is a fortunate fact that planning is scarcely affected by the choice between gas and electricity. Cookers and coppers in each case require about the same space and the same position in the room; the copper should be near the sink and can conveniently be covered by a flap table-top when not in use for washing clothes; if this table-top can adjoin the sink at the opposite side to the drainer-board so much the better—the unwashed crockery goes on the one, the washed on the other (Fig. 4). Room for another table and possibly a mangle is needed elsewhere in the room. Dresser, larder and store cupboard are most economically arranged in a single fitting the full length of the side wall opposite the cooker with the larder at the outside end for ventilation. With only one coal fire, sufficient coal storage can be provided by a box or bin at the bottom of the store cupboard or in the living-room; a pan shelf is needed and fits in well above the copper, handy for the cooker. All apparatus and fittings should be stoutly made to take a heavy usage; hard plaster should be used for the walls; granolithic cement is the cheapest satisfactory material for the floor, but the really good *cheap*, warm, washable, dustless floor-finish still, so far as I know, awaits an inventor.

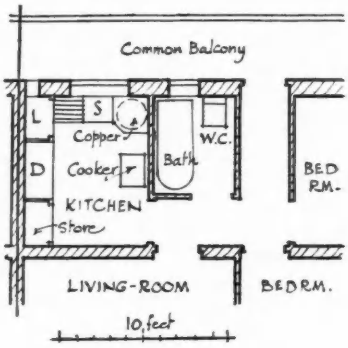
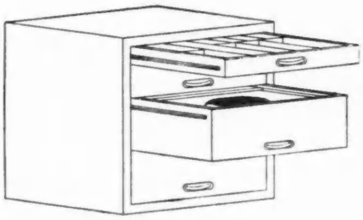


Fig. 4: Tenement flat.

It must not be supposed that the use of either gas or electricity for the flat kitchen is obligatory—the back-to-back combination or other solid-fuel system is quite practicable and probably rather cheaper to run. But it takes more space (including a much larger fuel storage) and is dirtier; it is no unusual thing to find that tenants in flats with solid-fuel cookers have put in gas-cookers for themselves. As to hot-water for the bath this may be derived from a boiler in connection with the living-room or other fire, from a gas geyser, or from a gas or electric storage-heater; but the minimum provision by which water is siphoned or pumped from the gas copper is economical in both initial and running cost and seems to be popular with tenants.



TRADE NOTES

[*BY F. R. S. YORKE, A.R.I.B.A.*]

Unit Kitchen Cabinets

THE photograph of a kitchen in a house at Auderghem, near Brussels, by L. H. de Koninck, on page 605 of this issue, illustrates the simplicity of arrangement of kitchen cabinets that can be achieved by the use of standardized kitchen units: cupboards, drawers and shelves. The units used here are marketed under the name Cubex, and were designed by Koninck for a type kitchen, executed at the Palais Royal des Beaux Arts on the occasion of the Third Congress of the International Congresses for Modern Architecture at Brussels in 1930.

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The primary elements are shown in the diagrams in the right-hand column of this page. The series comprises ten wood units, 60 by 60 by 45 or 60 cms., with drawers, shelves, or rails to take bottles and pans, interlaced wire racks for fruit or sloping bin-fronts for vegetables. There are also horizontal cupboards with sliding doors; vertical cupboards, 60 by 180 by 45 cms. (SN.1), to take brooms, etc., and cupboard units with sliding doors at back and front to form built-in service hatches between kitchen and dining-room (SG.2). Several of the units may be obtained with metal linings.

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A second series, of 99 units, is based on the grouping of primary elements in pairs, side by side, and a third series by grouping them one above another; the standard dimensions in each case being 60 by 120 by 45 or 60 cms.

Metal Sinks

In spite of their somewhat high cost, sinks made in stainless steel and monel metal are becoming increasingly popular in domestic as well as in hotel and restaurant kitchens. A wide range of unit stainless steel sinks for various purposes, in simple or composite forms, with combination draining boards, removable basins, etc., is now available, in this country. (See illustration overleaf). The sinks are rustless, seamless, and without projections or cavities in which dirt may lodge. The waste fitting is an integral part of the unit.

The metal is composed of:

18 per cent chromium
8 ,, ,, nickel.
74 ,, ,, steel.

These metals are melted together and poured into ingots, which are rolled into sheets, from which the sinks are pressed.

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Monel metal, an alloy of $\frac{2}{3}$ nickel and $\frac{1}{3}$ copper, is well suited to sink and drainboard construction. Although it has only recently been recognized as an ideal material for household use in the kitchen, it has for many years been used on the widest scale for sinks and working surfaces in hotels, restaurants, factories and institutions. Its hard and durable surface enable it to resist denting and damage, whilst its resistance to corrosion enables it to be used with safety in the preparation of food. The resilient properties of the metal sheet soften impacts and reduce dish breakage. This is a most important point in commercial service.

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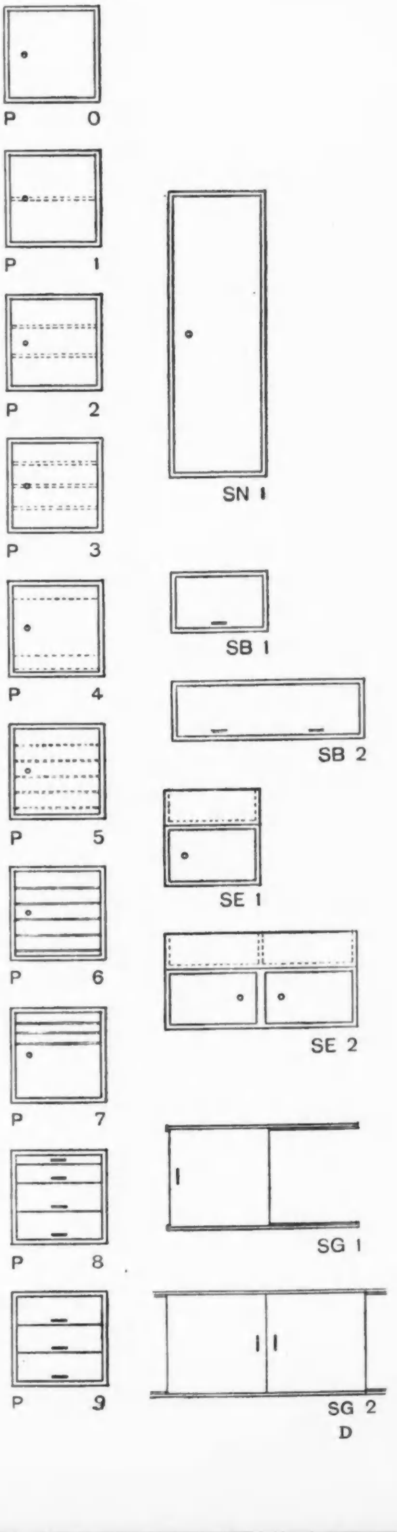
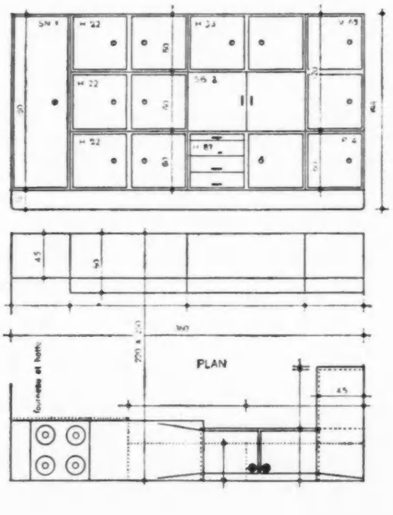
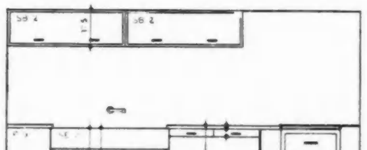
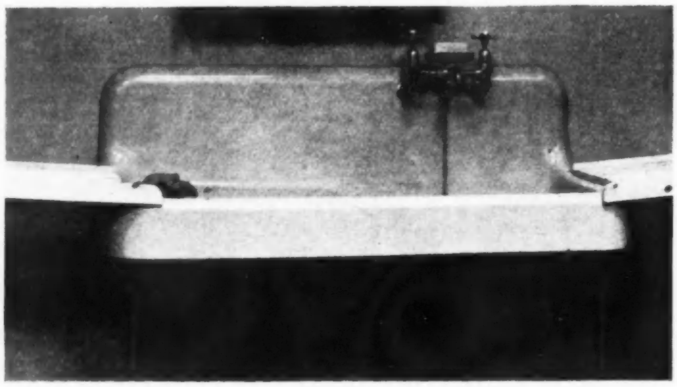
Such sinks weigh considerably less than the usual earthenware type; they are

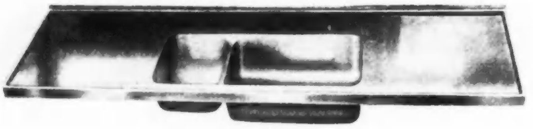


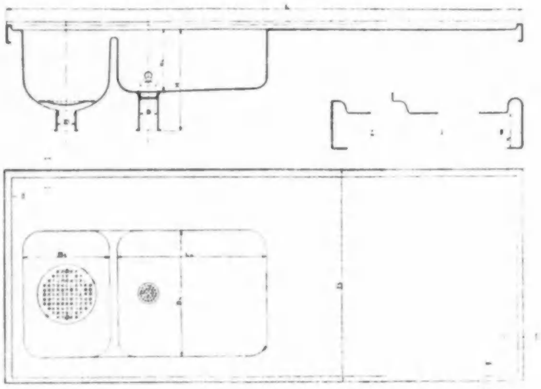




Kitchen cabinets and service hatch built-up from standard wood units; the diagrams in the right-hand column show standardized component parts.







Above: Combined sink, draining board and splash back, by Easiwork.

Left: Unit sink in pressed stainless steel.

Below: Domestic sink in monel metal.

reinforced by a welded structural framework that takes strain without reliance upon legs or additional supporting brackets. The undersides of the drainboard and splash back are insulated with sound deadening and insulating material.

Refrigerators

Electrolux have recently produced an interesting brochure illustrating domestic refrigerator installations in new apartment houses in the Gärdet district at Stockholm.

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Plans of seven types of flat are reproduced, side by side with enlarged plans of the kitchens and photographs of the walls on which the refrigerators are arranged. In almost every case the refrigerator forms part of the built-in kitchen equipment.

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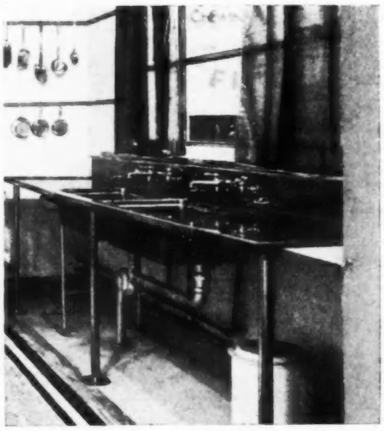
The L.I. Electrolux, one cubic foot, air-cooled type which is I understand the smallest and least expensive refrigerator on the market, is installed in the smaller



flats. It works automatically, but has no motor or other moving part, and it operates without vibration and consequently in silence. It may be operated by electricity or gas. It takes less space than the water-cooled type, but provision must be made for air intake and extract. Its retail price is less than £20.

Dish-washing Machines

In the past mechanical dish-washing apparatus has been manufactured mainly in the United States; but British equipment is now on the market, and appears at least as efficient as the foreign machine. The Hercules washer (see diagrams on page 615) is a British made, automatic type, with a stainless steel body and shafts, and a brass frame. Articles to be washed in it are stacked in trays and conveyed automatically through the machine, which washes, rinses and sterilizes them, and on emerging they dry within a few seconds. The supply of water to the machine is regulated automatically by the number of trays passing through it.

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It is constructed in two sections—the right half performing the function of washing, and the left rinsing and sterilizing. Each section contains its own tank, and virtually its own water pump for circulating water under pressure through top and bottom sprayers. Hot clean water is supplied automatically through top and bottom sterilizing sprays by the movement of the trays as they travel through the machine. These sterilizing sprays ensure quick drying and constitute the amount of water, or "make-up," used by the machine.

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As the rinse tank fills, the water passes over a weir into the wash tank, whence it drains from a standing waste, shown in the diagram mentioned above. The twin-pump and conveyor are driven by a single electric motor, transmission to the conveyor being applied through a ferrodo-lined lightly loaded safety clutch: should an object therefore foul the conveyor the clutch will slip and there will be no damage to the machine. A handwheel control is provided to start and stop the conveyor at will whilst the pump is running.

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The machine measures 7 ft. 3 ins. by 2 ft. 7 ins. by 4 ft. 8 ins. high; it will wash 8,000 pieces per hour, using for the operation approximately 35 gallons of water.

THE BUILDINGS ILLUSTRATED

Following is a list of the general and sub-contractors for the new showrooms of the Westminster Electric Supply Corporation at 112, Victoria Street, S.W.1, illustrated on pages 595-597 of this issue. General contractors, Bovis, Ltd. Lee-Elliot, designer of decorative map. Sub-contractors: James Couper & Co., Ltd., steelwork; Pollard & Co., Ltd., patent non-reflecting window; Boro' Electric Signs, signs and neon lighting; Comyn Ching & Co., Ltd., ironmongery; Dunlop Rubber Co., Ltd., rubber flooring; Textophote, Ltd., painting decorative map; Eric Mundy, Ltd., applied metal letters; Troughton and Young, Ltd., electrical fittings; Waring and Gillow, Ltd.; carpet; Lee and Kitley, chairs and settees, The Chiswick Guild, table; The Lord Roberts Memorial Workshops, mat.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

COULSDON. *Houses, Shops, Garages.* Plans passed by the U.D.C. : Four shops, High Street, for Messrs. Hooker and Rogers ; 108 houses, Woodlands estate, for Mr. E. G. Welsby ; six houses, Cranleigh Gardens, for Mr. P. Richardson ; two bungalows, Old Lodge Lane, for Mr. W. Butler ; 10 garages, St. Andrews Road, for Messrs. C. F. Smith & Co. ; two bungalows, Rydons Avenue, for Mr. W. G. Edward ; 10 houses, Coulsdon Vale estate, for Inter State Land Co., Ltd.

SANDERSTEAD. *Houses and Shops.* Plans passed : 12 shops and houses, Cranleigh Parade, for Messrs. Brice & Co. ; 11 shops and houses, Addington Road, for Mr. Albert Frampton ; 60 houses, Addington Road, for Messrs. R. Costain, Ltd., two houses, North Down, for Mr. H. P. Hawkes ; 18 shops, Limpsfield Road, for Mr. W. J. L. Horsman : two houses, York Road, and two houses, Kingsway Avenue, for Mr. G. Burgess ; 136 houses, Park Farm estate, for Industrial Builders, Ltd. ; two houses, Purley Downs Road, for Mr. P. Richardson ; three shops and two houses, Stoats Nest Road, for Messrs. Stanford & Co.

SOUTHGATE. *Houses.* Plans passed by the U.D.C. : 170 houses, Chase Vale Farm estate, for Messrs. Geo. Wimpey & Co., Ltd. ; 20 houses, Reservoir Road, for Mr. C. K. Codrington ; 1,200 houses, Oak Lodge estate, for Messrs. Ernest Owers, Ltd. ; six houses, Wilmer Way, for Mr. H. C. Keene ; five houses, Broadfields Avenue, for Mr. O. R. Davis ; eight houses, off Park Drive, for Mr. G. W. Newman ; two houses, Trent Gardens, for Mr. L. A. Lale ; church hall, High Street, for Messrs. Dawson, Son and Allardyce.

WEALDSTONE. *Houses.* Plans passed by the U.D.C. : Four houses, Westfield Drive, for Fairfields Builders, Ltd. ; 20 houses, Charlton Road, for Mr. N. D. Maidman.

SOUTHERN COUNTIES

BRIGHTON. *Houses.* The Corporation has arranged in connection with four clearances to erect new houses on the sites at a cost of £50,500, and on the Bristol estate at a cost of £22,600. About 150 houses will be erected.

BRIGHTON. *Houses, Shops and Flats.* Plans passed by the Corporation : Offices, West Street, for Phœnix Assurance Co., Ltd. ; six houses, Stanmer Villas, for Messrs. H. Newman and Sons ; two shops, Ditchling Road, for Mr. G. T. Poole ; 12 houses, Highview Avenue, for Ladies Mile Estate, Ltd. ; two houses, Marine Drive, for Mr. P. A. Stimson ; four flats, Rosebery Avenue, Rottingdean, for Mr. R. L. Funnell ; offices, West Street, for Essex and Suffolk Equitable Insurance Society, Ltd. ; two houses, Rosebery Avenue, for Mr. W. Rason ; 114 houses, Carden Avenue estate, and 26 houses, Bevendean Crescent, for Messrs. Braybons, Ltd. ; two houses, Valley Drive, for Mr. T. R. Braybon ; 24 houses, The Avenue, Bevendean, for Messrs. W. A. Gates and Sons, Ltd. ; four shops and flats, Marine Drive, for Messrs. Jeffries and Grant, Ltd.

CHELMSFORD. *Houses and Cinema.* Plans passed by the Corporation : Cinema, Baddow Road, for Mr. R. Cromie ; six houses, Kingstone Avenue, for Mr. J. Gowers ; garage extensions, Springfield Road, for Messrs. Sewell and King ; four houses, off Elgin Avenue, for Mr. A. J. Brown ; four houses, Moulsham Drive, for Mr. W. Campen.

GUILDFORD. *Houses, Roads and Sewers.* Plans passed by the Corporation : Roads and sewers, Winterhill estate, for Messrs. F. May and Sons, Ltd. ; two houses, Sheepfold Road, for Mr. G. Harms ; seven houses, Sheepfold Road, for Messrs. W. G. Harding, Ltd. ; 10 houses, Harts Gardens, for Chapman Building Co. ; two houses, Irwin Road, for Mr. H. Ashenden.

HASTINGS. *Aerodrome and Houses.* The Corporation now recommends a scheme for the provision of a municipal aerodrome at Pebsham, and is seeking sanction to borrow £9,000 for carrying out the work. Plans passed : 16 houses, Park estate, etc., for Messrs. Jeffery and Bowcock ; two houses, Sedlescombe Road, for Mr. S. D. Hicks.

PAIGNTON. *Houses and Development.* Plans passed by the U.D.C. : Five houses, Southfield Road, for Messrs. Wallis, Underhay & Co. ; 63 houses, Marldon Road, for Mr. J. H. Maunder ; estate development, Dunstone Park, for Messrs. Mitchell Bros. ; 10 bungalows, Brixham Road, for Messrs. R. H. Peeke and Son ; two bungalows, Three Beaches, for Coast Estates, Ltd. ; estate development, off Maidenway Road, for Paignton Development Co., Ltd. ; four houses, South Hillside Road, for Mr. R. J. Yeo.

SOUTH-WESTERN COUNTIES

CHELTENHAM. *Houses, Garages and Laundry.* Plans passed by the Corporation : 28 houses, Hatherley Road, for Messrs. Wheeler and Mansell ; laundry, Churchill Road, for Mr. T. W. Smith ; two houses, Montpellier Terrace, for Mrs. Bruce ; four houses, Evesham Road, for Mr. W. H. Bowd ; 29 houses, Alstone Lawn estate, for the Corporation ; two houses, Southam, for Mr. G. P. Hopcraft ; development (66 houses), junction of Croft Road, with Cirencester Road, Charlton Kings, for Messrs. E. H. Bradley and Sons ; two houses, Warden Hill Road, for Capt. A. Williams ; 34 garages, Garden estate, Charlton Kings, for Capt. J. L. Richardson.

SWINDON. *Houses.* Plans passed by the Corporation : Two houses, Downs View Road, for Messrs. Pope Bros. ; 40 houses, Gipsy Lane, for Messrs. Bishop and Fisher.

TORQUAY. *New Showrooms and Offices.* The Corporation Electricity Committee is seeking sanction to borrow £18,000 for the purchase of old Y.M.C.A. buildings ; £30,000 for the proposed new showrooms and offices, and £5,000 for fittings and furnishings.

MIDLAND COUNTIES

BIRMINGHAM. *Libraries.* The Corporation is to erect branch libraries at Yardley Wood and South Yardley, at an estimated cost of £13,750 each.

CHESTERFIELD. *Bus Station.* The Corporation has obtained sanction for a loan of £7,500 for the construction of a central bus station in Vicar Lane.

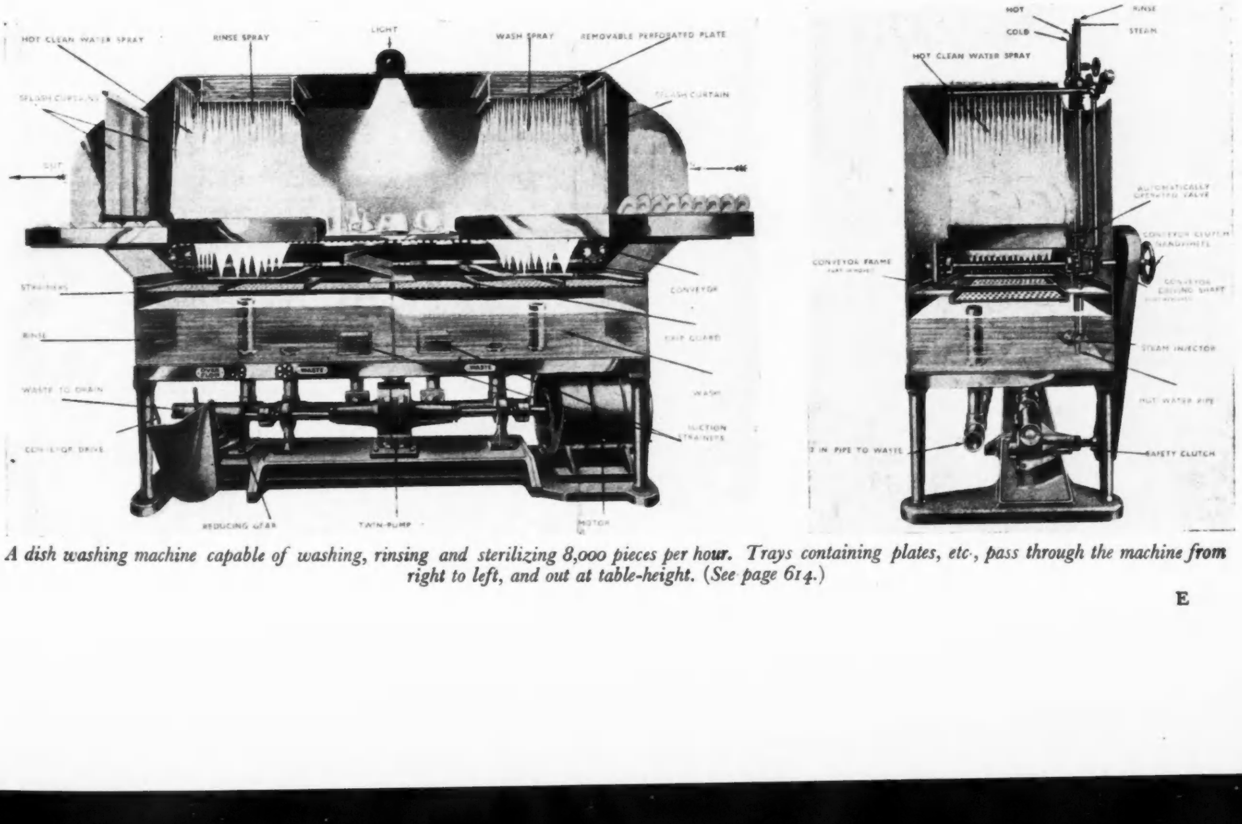
CHESTERFIELD. *Municipal Buildings.* The Corporation is seeking sanction to borrow £124,500 for the erection of new municipal buildings, on the Rose Hill estate.

NORTHERN COUNTIES

SOUTH SHIELDS. *Schools.* The Education Committee is to prepare plans for the provision of a secondary school and a central school, at an estimated cost of £61,000, sanction having now been obtained from the Board of Education for this purpose.

WAKEFIELD. *Baths.* The Corporation is to ask the Minister of Health whether he would be prepared to sanction a loan in respect of a scheme for new baths in Almshouse Lane, estimated to cost £25,000.

WALLSEND. *Slum Clearance.* The Corporation has prepared a slum clearance programme t cost £189,680.



A dish washing machine capable of washing, rinsing and sterilizing 8,000 pieces per hour. Trays containing plates, etc., pass through the machine from right to left, and out at table-height. (See page 614.)

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen ; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	ABERDARE ..	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny ..	S. Wales & M.	1 5	1 0¾
A_3	Abingdon ..	S. Counties	1 4	1 0
A	Accrington ..	N.W. Counties	1 5½	1 1¼
A_3	Addlestone ..	S. Counties	1 4	1 0
A	Adlington ..	N.W. Counties	1 5½	1 1¼
A	Airdrie ..	Scotland	*1 5½	1 1¼
C	Aldeburgh ..	E. Counties	1 1½	10¼
A	Altrincham ..	N.W. Counties	1 5½	1 1¼
B_3	Appleby ..	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone ..	Mid. Counties	1 4	1 0
B_2	Aylesbury ..	S. Counties	1 2½	11
B_1	BANBURY ..	S. Counties	1 3	11¼
B_1	Bangor ..	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley ..	Yorkshire	1 5½	1 1¼
B	Barnstaple ..	S.W. Counties	1 3½	11¾
A	Barrow ..	N.W. Counties	1 5½	1 1¼
A	Barry ..	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke ..	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley ..	Yorkshire	1 5½	1 1¼
A_3	Bedford ..	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley ..	Mid Counties	1 4½	1 0½
B_3	Bicester ..	S. Counties	1 2	10½
	Birkenhead ..	N.W. Counties	*1 7	1 2¼
A	Birmingham ..	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn ..	N.W. Counties	1 5½	1 1¼
A	Blackpool ..	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor ..	S. Counties	1 2½	11
A	Bolton ..	N.W. Counties	1 5½	1 1¼
A	Boston.. ..	Mid. Counties	1 4	1 0
A_3	Bournemouth..	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford ..	Yorkshire	1 5½	1 1¼
A_1	Brentwood ..	E. Counties	1 5	1 0¾
A	Bridgend ..	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater ..	S.W. Counties	1 3	11¼
A_1	Bridlington ..	Yorkshire	1 5	1 0¾
A	Brighouse ..	Yorkshire	1 5½	1 1¼
A_3	Brighton ..	S. Counties	1 4	1 0
A	Bristol ..	S.W. Counties	1 5½	1 1¼
B_3	Brixham ..	S.W. Counties	1 2	10½
A_2	Bromsgrove ..	Mid. Counties	1 4½	1 0½
C	Bromyard ..	Mid. Counties	1 1½	10¼
A	Burnley ..	N.W. Counties	1 5½	1 1¼
A	Burslem ..	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A_1	Buxton ..	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE..	E. Counties	1 4½	1 0½
B_2	Canterbury ..	S. Counties	1 2½	11
A	Cardiff ..	S. Wales & M.	1 5½	1 1¼
A	Carlisle ..	N.W. Counties	1 5½	1 1¼
B	Carmarthen ..	S. Wales & M.	1 3½	11¾
B	Carnarvon ..	N.W. Counties	1 3½	11¾
A	Carnforth ..	N.W. Counties	1 5½	1 1¼
A	Castleford ..	Yorkshire	1 5½	1 1¼
B	Chatham ..	S. Counties	1 3½	11¾
B	Chelmsford ..	E. Counties	1 3½	11¾
A_3	Cheltenham ..	S.W. Counties	1 4	1 0
A	Chester ..	N.W. Counties	1 5½	1 1¼
A	Chesterfield ..	Mid. Counties	1 5½	1 1¼
B_2	Chichester ..	S Counties	1 2½	11
A	Chorley ..	N.W. Counties	1 5½	1 1¼
B_2	Cirencester ..	S. Counties	1 2½	11
A	Clitheroe ..	N.W. Counties	1 5½	1 1¼
A	Clydebank ..	Scotland	1 5½	1 1¼
A	Coalville ..	Mid. Counties	1 5½	1 1¼
A_3	Colchester ..	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett ..	N.E. Coast	1 5	1 0¾
A_2	Conway ..	N.W. Counties	1 4½	1 0½
A	Coventry ..	Mid. Counties	1 5½	1 1¼
A_2	Crewe ..	N.W. Counties	1 4½	1 0½
A_3	Cumberland ..	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen ..	N.W. Counties	1 5½	1 1¼
A_2	Deal	S. Counties	1 2½	11
A_3	Denbigh ..	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury ..	Yorkshire	1 5½	1 1¼
B	Didcot ..	S. Counties	1 3½	11¾
A	Doncaster ..	Yorkshire	1 5½	1 1¼
B_2	Dorchester ..	S.W. Counties	1 2½	11
A_3	Driffield ..	Yorkshire	1 4	1 0
A_2	Droitwich ..	Mid. Counties	1 4½	1 0½
A	Dudley ..	Mid. Counties	1 5½	1 1¼
A	Dundee ..	Scotland	1 5½	1 1¼
A	Durham ..	N.E. Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale ..	S. Wales & M.	1 5	1 0¾
A	Edinburgh ..	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter ..	S.W. Counties	*1 4½	1 0½
B_1	Exmouth ..	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood ..	N.W. Counties	1 5½	1 1¼
B_2	Folkestone ..	S. Counties	1 2½	11
A	Frodsham ..	N.W. Counties	1 5½	1 1¼
B_2	Frome ..	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham ..	S. Counties	1 3½	11¾
A_2	Gloucester ..	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport ..	S. Counties	1 4	1 0
A_3	Grantham ..	Mid. Counties	1 4	1 0
A_1	Gravesend ..	S. Counties	1 5	1 0¾
A	Greenock ..	Scotland	*1 5½	1 1¼
A	Grimsby ..	Yorkshire	1 5½	1 1¼
B_1	Guildford ..	S. Counties	1 3	11¼
A	HALIFAX ..	Yorkshire	1 5½	1 1¼
A	Hanley ..	Mid. Counties	1 5½	1 1¼
A	Harrogate ..	Yorkshire	1 5½	1 1¼
A	Hartlepools ..	N.E. Coast	1 5½	1 1¼
B	Harwich ..	E. Counties	1 3½	11¾
B_2	Hastings ..	S. Counties	1 2½	11
A_3	Hatfield ..	S. Counties	1 4	1 0
B	Hereford ..	S.W. Counties	1 3½	11¾
A_3	Hertford ..	E. Counties	1 4	1 0
A	Heysham ..	N.W. Counties	1 5½	1 1¼
A	Howden ..	N.E. Coast	1 5½	1 1¼
A	Huddersfield ..	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY ..	Yorkshire	1 5½	1 1¼
A	Immingham ..	Mid. Counties	1 5½	1 1¼
A_3	Ipswich ..	E. Counties	1 4	1 0
B_3	Isle of Wight ..	S. Counties	1 2	10½
A	JARROW ..	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY ..	Yorkshire	1 5½	1 1¼
B	Kendal ..	N.W. Counties	1 3½	11¾
B	Keswick ..	N.W. Counties	1 3½	11¾
A_2	Kettering ..	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn ..	E. Counties	1 2½	11
A	LANCASTER..	N.W. Counties	1 5½	1 1¼
A_1	Leamington ..	Mid. Counties	1 5	1 0¾
A	Leeds ..	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester ..	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield ..	Mid. Counties	1 4½	1 0½
A	Lincoln ..	Mid. Counties	1 5½	1 1¼
	Liverpool ..	N.W. Counties	*1 7	1 2¼
A_2	Llandudno ..	N.W. Counties	1 4½	1 0½
A	Llanelly ..	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton ..	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton ..	E. Counties	1 4	1 0
A	Lytham .	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W Counties	1 5	1 0¾
B	Maidstone ..	S. Counties	1 3½	11¾
A_3	Malvern ..	Mid. Counties	1 4	1 0
A	Manchester ..	N.W. Counties	1 5½	1 1¼
A	Mansfield ..	Mid. Counties	1 5½	1 1¼
B_1	Margate ..	S. Counties	1 3	11¼
A_3	Matlock ..	Mid. Counties	1 4	1 0
A_1	Merthyr ..	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich ..	N.W. Counties	1 4½	1 0½
B_2	Minehead ..	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe ..	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH ..	N.W. Counties	1 4½	1 0½
A	Neath	S. Wales & M	1 5½	1 1¼
A	Nelson ..	N.W. Counties	1 5½	1 1¼
A	Newcastle ..	N.E. Coast	1 5½	1 1¼
A	Newport ..	S. Wales & M.	1 5½	1 1¼
A	Normanton ..	Yorkshire	1 5½	1 1¼
A_1	Northampton..	Mid. Counties	1 5	1 0¾
A	North Staffs. ..	Mid. Counties	1 5½	1 1¼
A	North Shields..	N.E. Coast	1 5½	1 1¼
A_2	Norwich ..	E. Counties	1 4½	1 0½
A	Nottingham ..	Mid. Counties	1 5½	1 1¼
A	Nuneaton ..	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM ..	Mid. Counties	1 4	1 0
A	Oldham ..	N.W. Counties	1 5½	1 1¼
A_3	Oswestry ..	N.W. Counties	1 4	1 0
A_2	Oxford ..	S. Counties	1 4½	1 0½
A	PAISLEY ..	Scotland	*1 5½	1 1¼
B_3	Pembroke ..	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth ..	S.W. Counties	*1 5½	1 1¼
A	Pontefract ..	Yorkshire	1 5½	1 1¼
A_1	Pontypridd ..	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth ..	S. Counties	1 4	1 0
A	Preston ..	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING ..	S. Counties	1 4½	1 0½
B	Reigate ..	S. Counties	1 3½	11¾
A_3	Retford ..	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale ..	N.W. Counties	1 5½	1 1¼
B	Rochester ..	S. Counties	1 3½	11¾
A_1	Ruabon ..	N.W. Counties	1 5	1 0¾
A	Rugby ..	Mid. Counties	1 5½	1 1¼
A_3	Rugeley ..	Mid. Counties	1 4	1 0
A	Runcorn ..	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS ..	E. Counties	1 4½	1 0½
A	St. Helens ..	N.W. Counties	1 5½	1 1¼
B_3	Salisbury ..	S.W. Counties	1 2	10½
A_1	Scarborough ..	Yorkshire	1 5	1 0¾
A	Scunthorpe ..	Mid. Counties	1 5½	1 1¼
A	Sheffield ..	Yorkshire	1 5½	1 1¼
A	Shipley ..	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury ..	Mid. Counties	1 4½	1 0½
A_2	Skipton ..	Yorkshire	1 4½	1 0½
A_3	Slough ..	S. Counties	1 4	1 0
A_2	Solihull ..	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport ..	N.W. Counties	1 5½	1 1¼
A	S. Shields ..	N.E. Coast	1 5½	1 1¼
A_2	Stafford ..	Mid. Counties	1 4½	1 0½
A	Stockport ..	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud ..	S.W. Counties	1 3½	11¾
A	Sunderland ..	N.E. Coast	1 5½	1 1¼
A	Swadlincote ..	Mid. Counties	1 5½	1 1¼
A	Swansea ..	S. Wales & M.	1 5½	1 1¼
A_3	Swindon ..	S.W. Counties	1 4	1 0
A_1	TAMWORTH ..	N.W. Counties	1 5	1 0¾
B	Taunton ..	S.W. Counties	1 3½	11¾
A	Teesside Dist...	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth ..	S.W. Coast	1 4	1 0
A	Todmorden ..	Yorkshire	1 5½	1 1¼
A_1	Torquay ..	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall ..	Mid. Counties	1 5½	1¼
A	Tyne District ...	N. E. Coast	1 5½	1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall ..	Mid. Counties	1 5½	1 1¼
A	Warrington ..	N.W. Counties	1 5½	1 1¼
A_1	Warwick ..	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby ..	Yorkshire	1 4½	1 0½
A	Widnes ..	N.W. Counties	1 5½	1 1¼
A	Wigan ..	N.W. Counties	1 5½	1 1¼
B_1	Winchester ..	S. Counties	1 3	11¼
A_3	Windsor ..	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester ..	Mid. Counties	1 4½	1 0½
A_3	Worksop ..	Yorkshire	4	1 0
A_1	Wrexham ..	N.W. Counties	·5	1 0¾
A_3	Wycombe ..	S. Counties	4	1 0
B_1	YARMOUTH ..	E. Counties	1 3	11¼
B_1	Yeovil ..	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

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* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
White Portland Cement	,,	8	15	0
Thames Ballast	per Y.C.		6	3
¾" Crushed Ballast	,,		6	9
Building Sand	,,		7	3
Washed Sand	,,		8	3
2" Broken Brick	,,		8	0
¾" ,, ,,	,,		10	3
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4"		6"	
		s.	d.	s.	d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	8	17	6
,, Wirecuts	,,	7	17	6
,, Brindles	,,	7	0	0
,, Bullnose	,,	9	0	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	7	10	0
Luton Facings	,,	7	10	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	0	0
Headers	,,	20	10	0
Bullnose	,,	27	10	0
Double Stretchers	,,	29	10	0
Double Headers	,,	26	10	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	4½
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	24	10	0
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		18	6
,, ⅞"	,,	1	1	6
,, 1"	,,	1	2	0
,, 1¼"	,,	1	5	0
,, 1½"	,,	1	10	0
Deal matchings ⅝"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1¼"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61¼	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	,,	8	6
,, ,, ⅜"	,,	8	3
,, ,, ½"	,,	8	0
,, ,, ⅝"	,,	7	6
,, ,, ¾"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3"		4"	
		s.	d.	s.	d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		8		10
Shoes	each	2	0	3	0
Anti-splash shoes	,,	4	6	8	0
Boots	,,	3	0	4	0
Bends	,,	2	7	3	9
,, with access door	,,	—		6	3
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	3	9	6	0
Plinth bends, 4½" to 6"	,,	3	9	5	3
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		6
Stop ends	each		6		8
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	0	6
,, drawn pipes	,,		17	6
,, soil pipe	,,	1	0	6
,, scrap	,,		11	0
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			8½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3"		4"		6"	
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2½
,, ,, 26 oz. ,, ,, ,,	,,					3½
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
¼" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	11	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	2	6	0
,, ordinary	,,	2	0	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
" to reduce levels n/e 5' 0" deep and cart away	Y.C.		8	6
" to form basement n/e 5' 0" deep and cart away	"		9	0
" " 10' 0" deep and cart away	"		9	6
" " 15' 0" deep and cart away	"		10	0
If in stiff clay . . . add	"		2	6
If in underpinning "	"		4	0
Planking and strutting to sides of excavation	F.S.		1	0
" " to pier holes	"			5
" " to trenches	"			5
" " extra, only if left in	"			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	"	1	6	0
" " (4-2-1)	"	1	12	6
" " underpinning	"	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
" junctions		3	9	4	6
Gullies and grating	"	16	6	18	0
Cast iron drains and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	28	10	0
" " in cement	"	29	15	0
" Stocks in cement	"	35	15	0
" Blues in cement	"	52	0	0
Extra only for circular on plan	"	2	0	0
" backing to masonry	"	1	10	0
" raising on old walls	"	2	0	0
" underpinning	"	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	"			5½
" " " red brick facings and pointing	"			11
" " " blue brick facings and pointing	"		1	4
" " " glazed brick facings and pointing	"		3	6
Tuck pointing	"			7
Weather pointing in cement	"			3½
Slate dampcourse	"			10
Vertical dampcourse	"		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	"	6	9
¾" paving or flat	"	4	0
1" paving or flat	"	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON

			s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	"		13	6
Artificial stone and do.	"		13	0
York stone templates, fixed complete	"		10	6
" thresholds	"		13	6
" sills	"	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	"	3	7	0
Do., 24" × 12"	"	3	17	0
Westmorland slating, laid with diminished courses	"	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	3	0	0
Do., all as last, but of machine-made tiles	"	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	"	4	6	6
" " " " " " (green)	"	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
" to stanchions	"			8
" to staircases	"		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	"		4	0
" " roofs	"		6	6
" " trusses	"		7	6
" " partitions	"		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" " " " "	"	1	17	6
1¼" " " " "	"	2	3	0
¾" × 2" fir battening for Countess slating	"		9	6
Do. for 4" gauge tiling	"		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
" " " 2 "	"		2	9
" " " 3 "	"		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" " " " " "	"		1	6
2" deal wrought rounded roll	F.R.			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	2	6
1¼" do.	"	2	12	6
1½" do.	"	2	19	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1¼" do.	"		1	11

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	11
2" " "	"	2	1
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	3	9
2" " " "	"	4	0
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" " " "	"	2	8
1½" " but moulded both sides	"	2	4
2" " " "	"	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	2
4½" × 3½" " "	"	1	8
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	2	6
1½" deal moulded wall strings	"	2	1
1½" " outer strings	"	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" " "	"	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	"	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	"		19	6
Do. stanchions with riveted caps and bases and do.	"		19	0
Mild steel bar reinforcement, ¼" and up, bent and fixed complete	"		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	0
Do. in flashings		1	17	6
Do. in covering to turrets, etc.	"	2	3	6
Do. in soakers	"	1	9	6
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close " "	"			4½

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	"	6½	8	9	11	1	—
Boiler screws and unions	"	3 3	3 9	5 0	8 0	—	—
Lead traps	"	—	—	—	6 3	8 9	—
Screw down bib valves	"	6 9	9 6	11 0	—	—	—
Do. stop cocks	"	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	"	1	6
Do. outlets	"	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	"	5	6

PLASTERER AND TILING

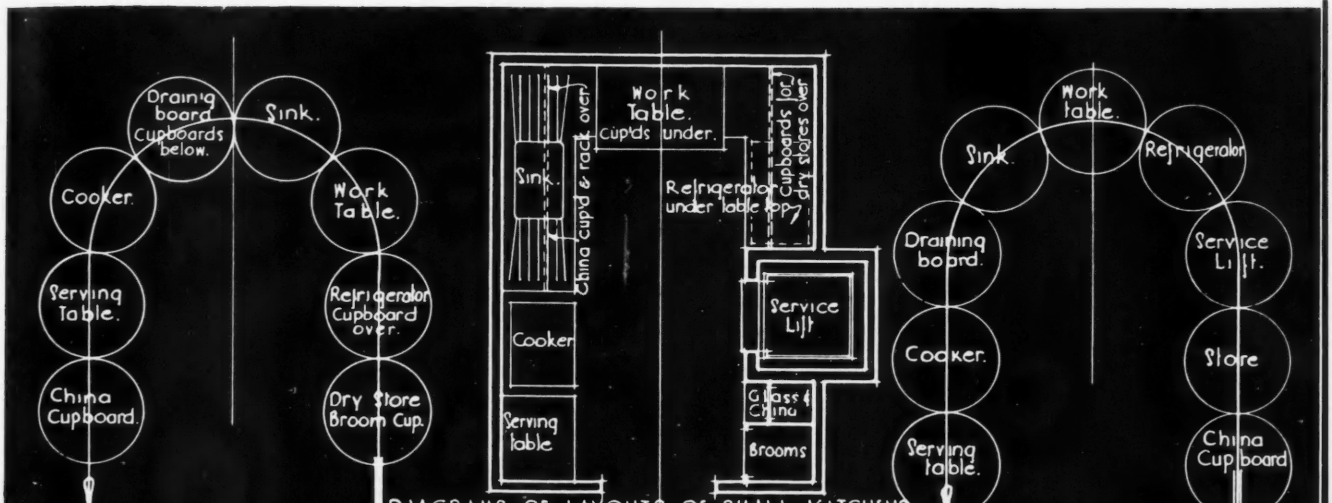
			s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	"		3	6
Lathing with sawn laths to ceilings	"		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"		1	9
Do. vertical	"		2	3
Rough render on walls	"		1	4
Render, float and set in lime and hair	"		2	0
Render and set in Sirapite	"		2	2
Render, backing in cement and sand, and set in Keene's cement	"		3	1
Extra, only if on lathing	"			4
Keene's cement, angle and arris	F.R.			6
Arris	"			2
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			1½
1" granolithic pavings	Y.S.		3	6
1½" "	"		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	"		17	6
9" × 3" " " " "	"	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	"		8½
Arctic glass and glazing with putty	"	1	1
Cathedral glass and do.	"	1	2
Glazing only, British polished plate	"		7
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	"		9
Do. with washable distemper	"	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	"	2	9


Draining board Cupboards below.
Sink.
Cooker.
Work Table.
Serving Table.
Refrigerator Cupboard over.
China Cupboard.
Dry Store Broom Cup.
Work Table. Cup'ds under.
Sink.
China cup'd & rack over
Refrigerator under table top
Cupboards for dry stores over
Service Lift
Cooker
Glass & China
Serving table
Brooms
Work table.
Sink.
Refrigerator
Draining board.
Service Lift.
Cooker.
Store
Serving table.
China Cupboard

DIAGRAMS OF LAYOUTS OF SMALL KITCHENS.

A METHOD OF STANDARDISING WIDTHS OF FITTINGS

Standard unit width	1' 8"
Standard door width	1' 5"

Used in multiple sections with 1½" trim between adjacent doors unit widths become :

1 unit	1' 8"
2 units	3' 2½"
3 units	4' 9"

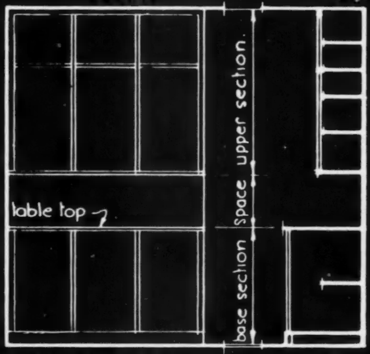
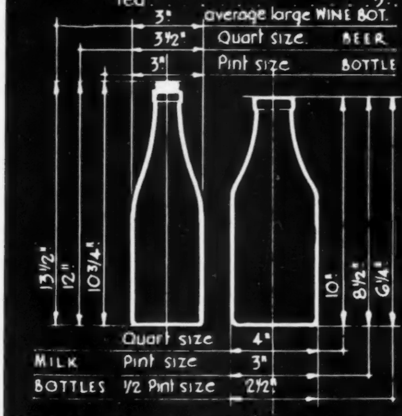


table top
Space upper section.
base section

DIAGRAM OF TYPICAL CUPBOARD UNITS.

AVERAGE SIZES OF CUTLERY ETC.

Carving knives	14"
Carving forks	10½"
Table knives	9½"
forks	8"
Spoons, table	9"
dessert	7½"
tea	5"


3"
average large WINE BOT.
3½"
Quart size.
BEER
3"
Pint size
BOTTLE
13½"
12"
10¾"
10"
8½"
6¼"
Quart size
4"
MILK
Pint size
3"
BOTTLES
½ Pint size
2½"

STANDARD DIMENSIONS OF FITTINGS

Ceiling height, minimum.		8' 0"
Door & window height.		6' 8"
Door width.		2' 8"
Stove area, maximum		3' 6" × 2' 4"
Refrigerator area, maximum.		3' 3" × 2' 0"
Sink width, average		1' 10"
Drain. board lengths, average		2' 6" – 3' 6"
Height of work surface		2' 9"
Height of work surface for person seated.		2' 1"
Cupboards :		
Base section,	height	2' 9"
	depth	1' 10"
	width	1' 8", 3' 2½", 4' 9"
Upper section,	depth	12¼"
	width	1' 8", 3' 2½", 4' 9"
Clear height above table top between base and upper sections.		1' 3"
Movable table	height	2' 1"
	length	3' 0"
	width	1' 8"
Spice Cabinet	height	1' 5"
	door width	1' 3"
Drop shelf	height	2' 1" or 2' 9"
	width	1' 3"

Shelves :

: in dish cabinets, width 1' 0"

: over sinks & work tables. 3" - 9"

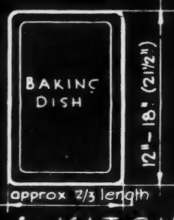
: in the base section of cabinets should be ½ the depth of the base section

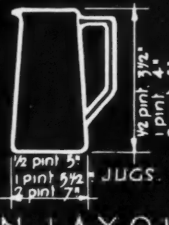
Drawers :

average depth overall 4½"

Toe room must be allowed to all cabinets.

Sinks : space under sinks should be left open as knee space & for accessibility.


BAKING DISH
12" – 18" (21½")
approx 2/3 length


½ pint 3½"
1 pint 4"
2 pint 5"
½ pint 5"
1 pint 5½
2 pint 7"
JUGS.

GENERAL REQUIREMENTS

Separate table space is required in Kitchens for :

Serving
Preparation & mixing
Stacking soiled dishes
Draining dishes.

Order of work in a Kitchen :

1. Collection of food
2. Preparation
3. Cooking
4. Serving
5. Removing soiled dishes
6. Scraping and stacking
7. Washing dishes
8. Draining dishes

Circulation :

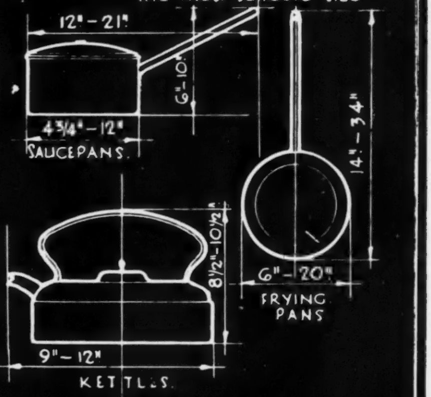
usually more convenient from right to left

Draining board must be on the left hand side of the sink.

Sequence of equipment :

1. Refrigerator
2. Storage
3. Work Table
4. Sink
5. Range
6. Serving table

Sinks : Where there is only one Sink, it must be used for all purposes – & 22" x 18" x 6" is probably the most suitable size


12" – 21"
6" – 10"
4¾" – 12"
SAUCEPANS.
14" – 34"
6" – 20"
FRYING PANS
8½" – 10½"
9" – 12"
KETTLES.

INFORMATION SHEET : KITCHEN LAYOUTS & GENERAL SIZES.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1

INFORMATION SHEETS

• 51 •

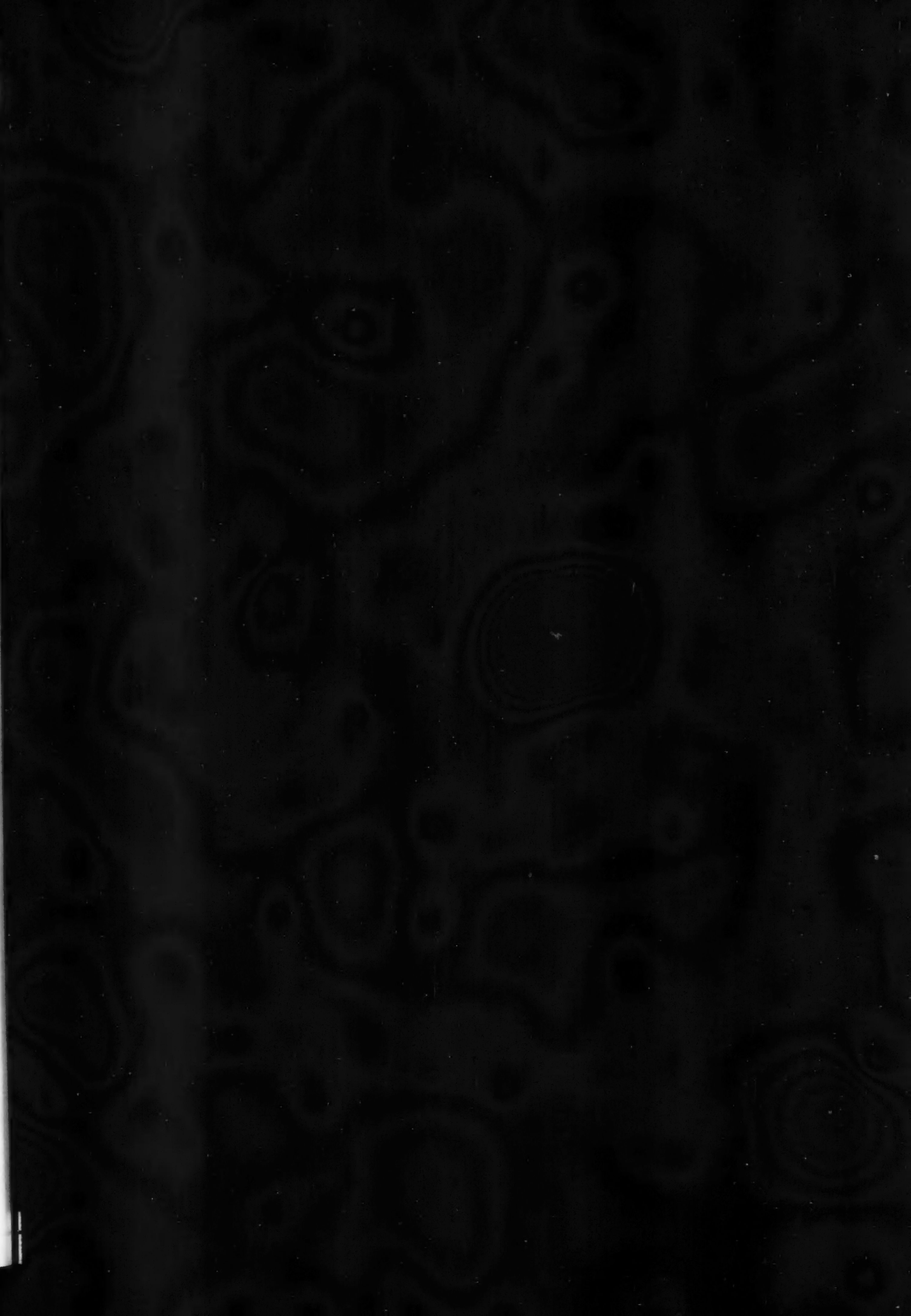
KITCHENS

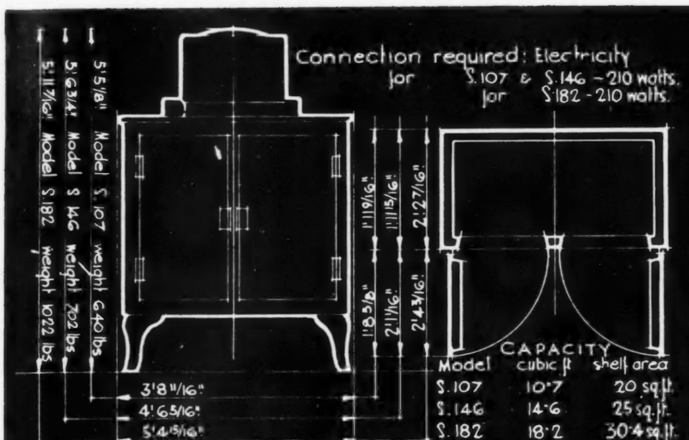
•

THE Information Sheet overleaf is devoted to kitchen lay-outs and general sizes; and the other Sheet presented with thjs issue gives the common sizes of various domestic refrigerators.

The following is a full list of the subjects previously issued :—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units: 1.
13. Apr. 12—Lavatory Units: 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes.
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs : 1.
23. June 29—Concrete Stairs : 2.
24. July 6—Pressed Steel Stairs : 1.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs : 2
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes : 1.
30. Aug. 17—Lay-out of Wardrobes : 2.
31. Aug. 24—Common Sizes Miscellaneous.
32. Aug. 24—Electric Lighting : I.
33. Aug. 31—Electric Lighting : II.
34. Aug. 31—Electric Lighting : III.
35. Sept. 7—Electric Lighting : IV.
36. Sept. 7—Vacuum Cleaning Systems.
37. Sept. 14—Steelwork : I.
38. Sept. 14—Steelwork : II.
39. Sept. 21—Steelwork : III.
40. Sept. 21—L.C.C. Waivers : I.
41. Sept. 28—L.C.C. Waivers : II.
42. Sept. 28—L.C.C. Waivers : III.
43. Oct. 5—L.C.C. Waivers : IV.
44. Oct. 5—Phorpres Cellular Flettons.
45. Oct. 12—Lay-out of Hockey Field.
46. Oct. 12—Lay-out of Tennis Court.
47. Oct. 19—Lay-out of Rugby Field.
48. Oct. 19—Lay-out of Association Field.
49. Nov. 2—Lay-out of Badminton Courts: 1.
50. Nov. 2—Lay-out of Badminton Courts: 2.




5'5/8" Model S.107 weight 640 lbs
5'6 3/4" Model S 146 weight 702 lbs
5'11 7/16" Model S.182 weight 1022 lbs
1'11 9/16"
1'11 15/16"
2'2 7/16"
1'8 5/8"
2'1 1/16"
2'4 3/16"
3'8 11/16"
4'6 5/16"
5'4 15/16"

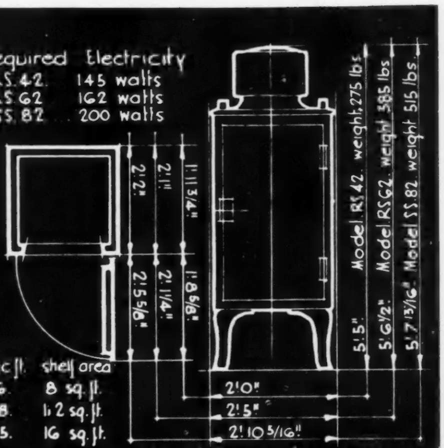
Connection required: Electricity
for S.107 & S.146 – 210 watts.
for S.182 – 210 watts.

CAPACITY

Model	cubic ft	shelf area
S.107	10·7	20 sq.ft.
S.146	14·6	25 sq.ft.
S.182	18·2	30·4 sq.ft.

DIAGRAMS OF VARIOUS B.T.H MODELS (1933).

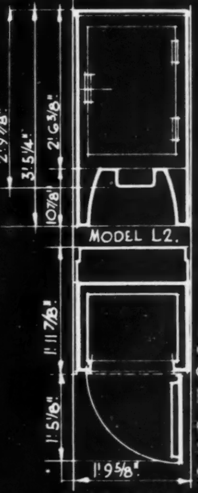
Connection required Electricity
for RS.42. 145 watts
for RS.62 162 watts
for SS.82 200 watts


2'2"
2'1"
1'11 3/4"
2'5 5/8"
2'1 1/4"
1'8 5/8"
Model RS.42 weight 275 lbs
Model RS.62 weight 385 lbs
Model SS.82 weight 515 lbs
5'5"
5'6 1/2"
5'7 13/16"
2'0"
2'5"
2'10 5/16"

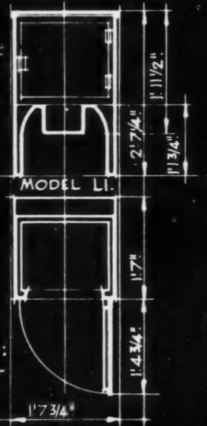
CAPACITY

Model	cubic ft.	shelf area
RS.42.	4·6.	8 sq.ft.
RS.62.	6·8.	11.2 sq.ft.
SS.82.	8·5.	16 sq.ft.

Information from the International Refrigerator Co. Ltd.

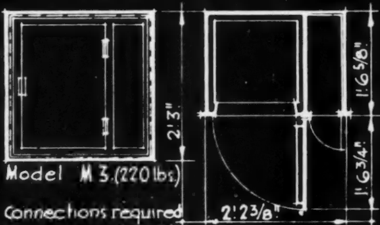

2'9 7/8"
3'5 1/4"
2'6 3/8"
10 7/8"
MODEL L2.
1'11 7/8"
1'5 1/8"
1'9 5/8"

Model L1. (105 lbs.)
Connections required:
Gas (1½ c.ft/hour) or
Electricity (150 watts).
CAPACITY:
1 cubic foot
Shelf area 1½ sq.ft.


1'11 1/2"
2'7 1/4"
1'1 3/4"
MODEL L1.
1'7"
1'4 3/4"
1'7 3/4"

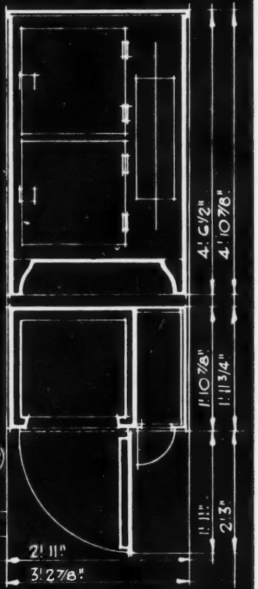
Model L2. (220 lbs.)
Connections required:
Gas (2½ cubic ft/hour) or
Electricity (200 watts)
CAPACITY:
2 cubic feet
Shelf area 3½ sq.ft.

Models L1. & L2. may be had without legs for building-in
Should not be built-in without provision for air circulation.


2'3"
1'6 5/8"
1'6 3/4"
2'2 3/8"

Model M 3. (220 lbs.)

Connections required
Gas (2½" cubic ft/hour)
or Electricity (200 watts)
& water (3 gals./hour)
CAPACITY: 3·2 cubic ft.
Shelf area 4½ sq.ft.

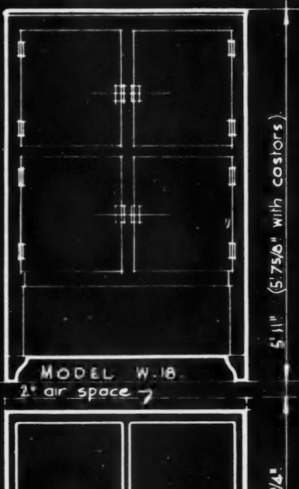

4'6 1/2"
4'10 7/8"
1'10 7/8"
1'11 3/4"
1'11"
2'3"
2'11"
3'2 7/8"

Connections required:
Gas (3½ c.ft/hour) or Electricity (360 watts)
& Water (5 gals./hour)

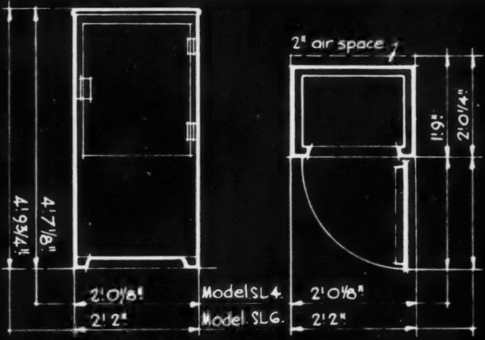
CAPACITY:

Model.	cubic. ft.	shelf area.	weight.
Model D.7.	7	10.	420 lbs.
Model D.10.	10·2	12.	462 lbs.

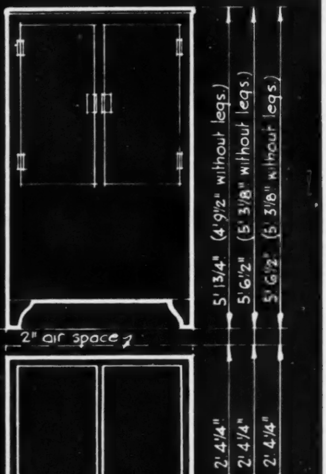
DIAGRAMS OF VARIOUS ELECTROLUX MODELS.
Information from Electrolux Ltd 1933.


MODEL W.18.
5'11" (5'7 5/8" with castors)
2" air space
2'4 1/4"
1'9"
3'10 1/2"

CAPACITY:
Cubic ft. 18¼.
Shelf area 33 sq.ft.


4'9 3/4"
4'7 1/8"
2'0 1/8"
2'2"
Model SL4.
Model SL6.
2" air space
1'9"
2'0 1/4"
2'0 1/8"
2'2"

CAPACITY:
Model SL.4. 4¼ cubic ft., 8½ sq.ft. shelf area.
SL.6. 6 cubic ft., 11 sq.ft. shelf area.


5'1 3/4" (4'9 1/2" without legs.)
5'6 1/2" (5'3 1/8" without legs.)
5'6 1/2" (5'3 1/8" without legs.)
2" air space
2'4 1/4"
2'4 1/4"
2'4 1/4"
1'3 1/2"
1'4"
1'9"
2'11 3/4"
3'1 1/4"
3'10 1/2"

DIAGRAMS OF VARIOUS FRIGIDAIRE MODELS.
Information from Frigidaire Ltd. 1933.

Consumption:

Electricity: Model SL.4, SL.6 } approx. 1 unit per day
W.8., W.10., W.12., W.18. } approx. 1½ units per day.

CAPACITY

Model.	Cubic ft.	Shelf area
Model W.8.	8	15 sq.ft.
Model W.10.	10¼	19¾ sq.ft.
Model W.12	13	24¾ sq.ft.

INFORMATION SHEET : COMMON SIZES OF VARIOUS DOMESTIC REFRIGERATORS

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1

Supplement to THE ARCHITECTS' JOURNAL for November 9, 1933

INFORMATION SHEETS

• 52 •

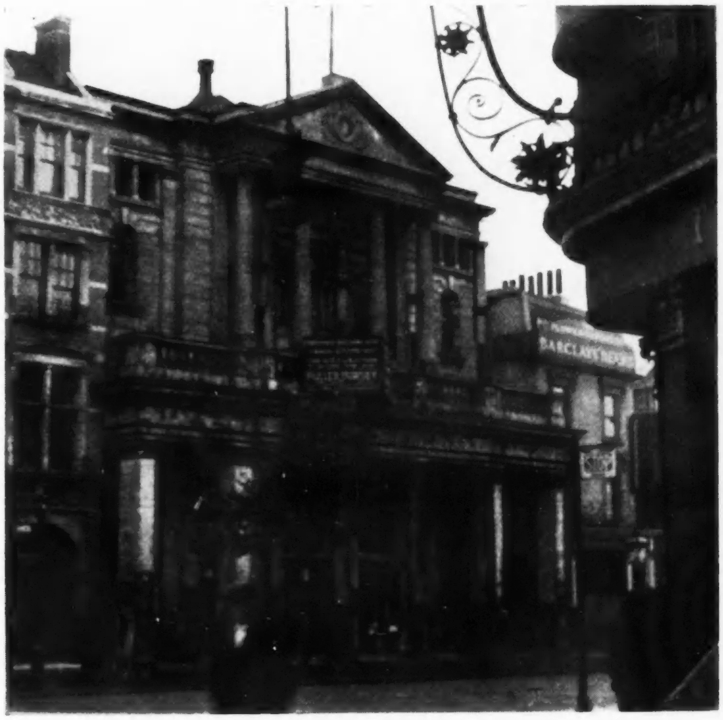
DOMESTIC REFRIGERATORS

•

FOR a list of the Information Sheets previously issued, see the other Sheet accompanying this issue.

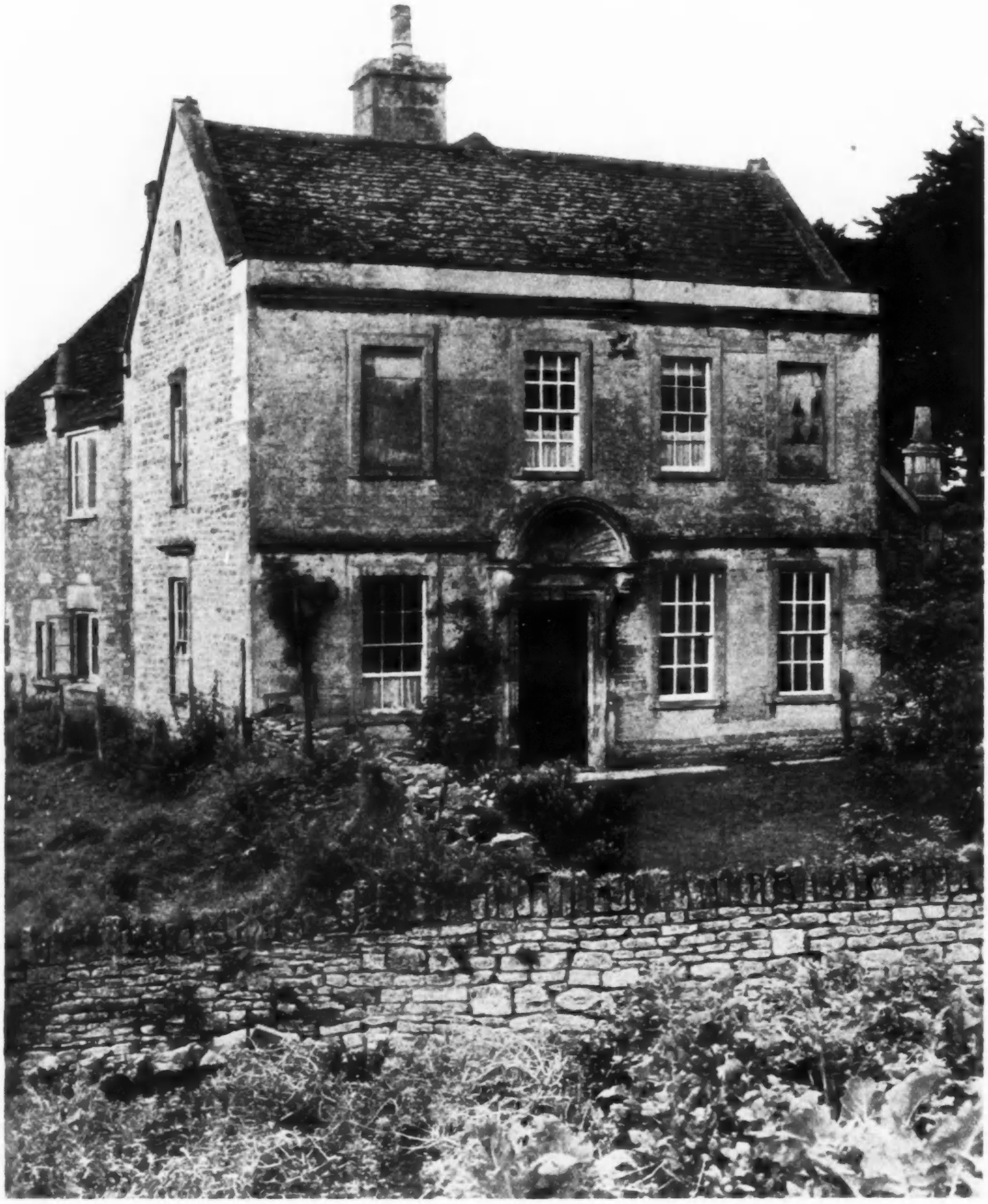
A DERELICT THEATRE

THE "ROYAL SURREY," SOUTHWARK



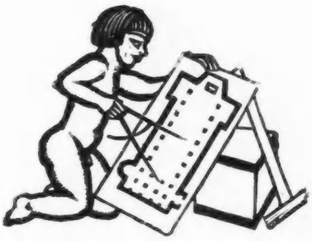
THIS theatre was erected in 1782. It has been closed since 1925 and its ultimate fate is still undecided.

It is now in a poor state of repair, with plaster peeling off the facade, and a notice-board advertising the freehold for sale. It is supported on either side by a public-house, and the neighbouring Old Vic is the only reminder of its gay and varied life before the entertainment business migrated to the West End.



MONKTON FARLEIGH, WILTSHIRE

This cottage, in the very small village of Monkton Farleigh, about four miles from Bath, is typical of the architecture of many of the larger villages of the West of England stone districts, whose character of sophisticated forms aligned as a smaller presentation of the urban manner contrasts with the other type of English vernacular village architecture where agricultural forms are grouped, or rather accumulated, on the traditional plan. The cottage is dated 1736.



THE ROYAL SOCIETY OF ARTS

THE Royal Society of Arts, with that profound regard for the welfare and progress of design in commerce that has distinguished it in the past, and particularly in the middle years of the last century, is again accepting responsibility for progressive measures of education in the field of industrial art. At the dinner held by the Society at the Merchant Taylors' Hall last week, the Prince of Wales, as president of the general committee of the Royal Academy Exhibition of British Art in Industry to be held in 1935, made a speech which underlined the importance of the step the Royal Society of Arts is taking in association with the Royal Academy. Whether collaboration between two bodies of this nature will become a sort of three-legged race will depend upon the intelligence with which the selection committees are chosen, and whether the organization of the projected exhibition will suffer from pre-war (or even earlier) ideas of what constitutes good design, depends wholly on the discernment and vigour of those committees.

His Royal Highness emphasized the responsibility of the judges. He said: "Co-operation between manufacturers and artists is essential if success is to come to our venture—if anything is to come of this Exhibition at all. In that way our artists will be doing a great service to our manufacturers; but if I have said that they will from now onwards have a great responsibility, so will those who will be selected to be the judges of the artists' work sent up to the Exhibition have a great responsibility."

Sir William Llewellyn, in his reply to the speech made by the Prince of Wales, said that of late the subject of art in industry had been much in the air. Whether he meant *on* the air, and was referring to the series of broadcast talks on "Design in Modern Life," which was given earlier this year by the B.B.C., and which represented a far-reaching contribution to the education of the public, or whether he meant that the subject had just reached the rarefied heights of æsthetic appreciation in which dwell the Royal Academicians it was difficult to say, but he omitted to mention that in the middle of this year industrial art had been very much on the ground, in the middle of London, in the shape of an Exhibition at Dorland Hall. The omission of all reference to that admirably organized Exhibition of Industrial Art in Relation to the Home, not only by the President of the Royal Academy, but by Mr. John A. Milne, Chairman of the Council of the Royal Society of Arts, who spoke after Sir William Llewellyn, means one of these three things: 1, that they had not heard of it; 2, that they thought it was a thoroughly bad show, and therefore with great courtesy refrained from speaking of it; or, 3, felt that as it was organized by public-spirited private individuals that it deserved a public slight by sectarian-spirited public bodies.

The Gorrell Committee was referred to, and its recommendations were mentioned. But there was palpable anxiety on the part of the speakers who followed the Prince to make it clear that art in industry was the peculiar and special idea of their own societies. Attention is not drawn to this in any pettifogging way. *The Week-End Review* has commented on the unfortunate attitude that came to light after the Prince's fine, lucid and inspiring speech had made the idea of enthusiastic and practical co-operation by everybody interested in the vast field of industrial design seem not only desirable, but obvious and imperative.

Unless the 1935 Exhibition can command the experience and knowledge that exists, not only within the Royal Academy and the Royal Society of Arts, but in bodies such as the Design and Industries Association, and among the considerable number of people who, with patience and persistent propaganda have been bringing manufacturers and designers together since the war; unless the responsibility for the Exhibition is made broader, there is a danger that it will lose touch with contemporary ideas, and designers will then miss what may well be an unrepeatable opportunity for converting industrial administrators.

There is abundant talent that can be called on to contribute to the success of this Exhibition, and perhaps no professional body can provide so many sincere well-wishers and so many willing helpers as the architectural profession.

The Architects' Journal
9 Queen Anne's Gate
Westminster, S.W.1
Telephones: Victoria
9 2 1 2 - 7
Telegrams:
Buildable
Parl
London

NOTES & TOPICS

ADVICE TO YOUTH

I HAVE discussed with several young architects Sir Giles Gilbert Scott's presidential address to the R.I.B.A., delivered recently from that seat of architectural authority.

*

They each expressed profound disappointment in its excessive caution, its mistrust of experiment and its strong objurgation of the machine, envisaged as the "bogyman" of architecture.

*

Some hastened to say that they would do their best to correct the erroneous impression of the architects' capabilities of solving the problems of contemporary life, which the speech must have conjured in the minds of their more intelligent friends and clients.

*

It seems such a pity that the President of the R.I.B.A. should select for faint praise and mixed condemnation forms of architecture being evolved by younger men to the very great benefit of the profession, and that on top of this he should issue a general warning to go slow at a time when young men are fired by, and have the means of firing others with, the realities of contemporary architecture.

*

Contrast this with the Earl of Harewood's recent speech, also to architects: "Imitations of early Greek or Roman or Gothic styles are not to be commended in modern life. . . . . I feel that it is absolutely essential that we should carry on the development of our lives in art as fast as the engineers and the great inventors are carrying on their own spheres. If we can manage to move the arts, especially architecture, at the same pace as the engineers are moving, then I am sure you will keep your art *a live art*."

*

That, I maintain, is advice to youth.

AT FORTNUM AND MASON'S

Exhibition follows on exhibition. One of the most satisfactory things has happened. *The Architectural Review* and Fortnum and Mason's between them have arranged an exhibition of good modern furniture *which is cheap*.

*

I have mentioned it before, and I believe it is dealt with elsewhere in this issue—Alvar Aalto's Finnish furniture. This, to my mind, is epoch-making.

*

Are we not all sick to death of the modern stuff that is snob because it is expensive, expensive because it is modern, and modern because it is snob?

*

If any architect wants to see simple and beautiful furniture that is cheap by Drage standards, let him go to Fortnum's. In opening the exhibition on Monday, the Finnish Minister said charming things about the "debt" that his country owed to *The Architectural Review* for organizing the exhibition. The debt, I venture to think, is all on the other side.

*

Finland, alone amongst the countries of the world, is showing us that intelligent co-operation between designer and manufacturer can produce, by mass production methods, the furniture we want at a price that is, as the advertisements say, within the reach of all.

*

And that the exhibition should be held at Fortnum's is, I think, apt and just, for Fortnum's have already set a standard of good design in many of those things for which England is not unjustly renowned.

SHEFFIELD CITY HALL

Mr. Vincent Harris has been "getting it in the neck" from the Sheffield people over that never-failing source of trouble, acoustics of public halls.

*

The Sheffield City Hall had to be designed for speech; the architect's instructions were explicit, and he carried them out. Now everybody in Sheffield is wondering why the architect has not given them a perfect concert hall.

*

Dr. Desmond MacMahon has been complaining in the local press, and, of course, blaming it all on the architect. It never seems to occur to anyone that the architect has occasionally to do what he is told.

*

It would probably be amusing to carry out Dr. MacMahon's suggestions. I have no doubt that Mr. Vincent Harris would enjoy doing it all; and then putting it all back as before, when the next public meeting has shown

The telephone numbers of The Architectural Press have been changed to Victoria 9212-7

Professor Moholy-Nagy, late of " The Bauhaus," Dessau, who arrived in England on Friday last.

how a fine speaking voice can be ruined by reverberation, and a bad one magnified far beyond its true value.

*

Acoustics are troublesome, Dr. Desmond MacMahon. A concert hall and a meeting hall have many points of difference. But don't blame the architect for physical facts—nor grouse when he obeys the orders of his client, however stupid you consider those orders to have been.

THE R.S.A. AND INDUSTRIAL DESIGN

It was my good fortune to sit between the chairman of a big industrial firm in the north, and the sales manager of a big industrial firm in the south, at the Royal Society of Arts dinner last week at Merchant Taylors' Hall. They were completely in agreement over every point made by the Prince of Wales, who spoke on art in industry, with particular reference to the Royal Academy Exhibition of British Art in Industry to be held in 1935.

*

The Prince had said : " All forms of experts, except artists, have been employed, because manufacturers have not recognized how the artist can sometimes help in the design and consequent sale of a commodity."

*

" Perfectly true," said the manufacturer afterwards ; " but we're waking up. Look at that Dorland Hall show, this year."

*

The sales manager wondered why it hadn't been mentioned either by the President of the Royal Academy or the Chairman of the Royal Society of Arts. A good many people were wondering the same thing ; but maybe they'd both mislaid their notes. There was an air of urbane incoherence in both their speeches, I thought.

*

The Prince's speech was magnificent. It was totally unnecessary to have had any others.

*

I hear that most of the broadcast talks on *Design in Modern Life* are to be published early next year in book form. The talks have been re-written, enlarged and revised, and are to be issued by Allen and Unwin.

A SPECIOUS ARGUMENT

A letter in Monday's *Daily Telegraph* contains a dangerously glib suggestion to the effect that the " speculative builder " is not to blame at all !

*

" No section of the business community," says the writer, " has done more than the private builder in meeting a desperate public need."

*

Thus he administers a friendly pat on the back to the jerry-builder—and then goes on to lay all the blame on the local authorities, who have been slow to adopt the powers given to them by Parliament.

*

Although the matters of the control of design and of town planning are not without their difficulties, most people do regret that so many opportunities have been allowed to slide for, in some cases, incredible periods of time.

*

Passing-on-the-blame is an old and favoured pastime ; but so far as the speculative builder is concerned, as in most other cases, " two blacks don't make a white."

*

Nor is it any the less wrong to embezzle cash because you can stand up to a tolerant world afterwards and clear yourself of blame on the ground that the police had, all along, powers to stop you from going so far.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, November 16

L.C.C. GEFFRYE MUSEUM LECTURES. At *Kingsland Road, Shoreditch, E.2.* " Sheraton." By Herbert Cescinsky. 7.30 *p.m.*

ROYAL SOCIETY OF ARTS. At *John Street, Adelphi, W.C.2.* " The Application of Electricity to Agriculture and Horticulture." By S. S. Nehru, M.A., PH.D., I.C.S. 4.30 *p.m.*

EXHIBITION OF MODERN LIVING. At *Whiteleys, Queen's Road, W.2.*

EXHIBITION OF FINNISH FURNITURE. At *Fortnum and Mason's, Piccadilly, W.*

Friday, November 17

INSTITUTION OF WELDING ENGINEERS (Midland Branch). At *Birmingham.* " Stainless Steels and Their Treatment." By F. Leverick.

Saturday, November 18

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Visit to Battersea Power Station.

Monday, November 20

HORNIMAN MUSEUM LECTURES. At the *Horniman Museum, Forest Hill, S.E.23.* " Arts and Crafts in Early Britain." By T. D. Kendrick, M.A. 3.30 *p.m.*

Tuesday, November 21

CHADWICK PUBLIC LECTURES. At the *London School of Hygiene, Keppel Street, W.C.1.* " The One-Pipe System of House Drainage in Theory and Practice." By Dr. Charles Porter and W. H. Draper. 8 *p.m.*

CAMBRIDGE UNIVERSITY ARCHITECTURAL SOCIETY. At *Mill Lane Lecture Rooms.* " Limes, Plasters, Cements and Sands." By J. B. Johnson. 8.15 *p.m.*

MORLEY COLLEGE. At 61 *Westminster Bridge Road, S.E.1.* " The New Architecture of Austria, Germany and France." By Frederick Towndrow, A.R.I.B.A. 8 *p.m.*

Wednesday, November 22

FEDERATION OF PROGRESSIVE SOCIETIES AND INDIVIDUALS (Town and Country Planning Group). At 55 *Russell Square, W.C.1.* " The Artist as Planner." By Frederick Towndrow, A.R.I.B.A. 7.45 *p.m.*

NEWS

POINTS FROM THIS ISSUE

Unless the responsibility for the 1935 Royal Academy Exhibition of British Art in Industry is made broader, there is a danger that it will lose touch with contemporary ideas 621

There is a danger that in the endeavour to clear the slums and provide alternative accommodation in their place, the work will be done piecemeal and that neighbourhood replanning will lag behind instead of preceding building 624

Fair compensation is not possible under the Housing Statutes as they now stand 625

Alvar Aalto's chairs (now on exhibition in London), were the first to be made with pliant one-piece backs and seats mounted on resilient frames 630

" An arbitrator, in the discharge of his judicial functions, cannot delegate such functions to another person unless he is expressly empowered so to do " 637

A SOUND-FILM OF SWEDEN

A new Swedish sound-film entitled " A Bird's-eye View of Sweden " was shown for the first time in England at the Cambridge Theatre, London, on Tuesday last.

MANCHESTER CORPORATION'S 20,000th HOUSE

The Manchester Corporation has now completed its 20,000th house. It is to be officially opened by Sir Hilton Young on November 20.

BOURNEMOUTH'S DEPUTY ARCHITECT RETIRES

Mr. A. E. Shervey, F.R.I.B.A., has retired from the post of deputy borough architect to the Bournemouth Corporation. Mr. Shervey has designed practically every building that has been erected by the Town Council during the past twenty-eight years.

TOWN PLANNING INSTITUTE

In the course of his presidential address to the Town Planning Institute on November 10, Mr. T. Alwyn Lloyd, F.R.I.B.A., said : " The new Town and Country Planning Act opens up great opportunities for civic replanning and design ; in giving a courageous lead in the right direction our Institute can perform very useful public service. In the present campaign, led by the Prince of Wales and the Minister of Health, for dealing with the evil of the Slums and eradicating that national disgrace by means of clearance and improvement schemes there is a wonderful opportunity for replanning as well as for rehousing. But to make the most use of that opportunity needs constant vigilance ; the danger is that in the laudable endeavour to clear the slums and provide alternative accommodation in their place, the work will be done piecemeal and that neighbourhood replanning will lag behind instead of preceding building. That point needs to be driven home in national and local administration on every available occasion."

BUILD NOW! WHILE COSTS ARE LOW

Last week we pointed out the need for industrial re-equipment by building, and the fact that with low costs and high unemployment no time is more propitious than the present.

" The Economist," in its issue for November 11, gives further information with regard to costs, and adds its weight to the plea for more building NOW. According to " The Economist " index of building costs, " between 1929 and September, 1933, wage rates and materials recorded a fall of 10 per cent., and of 13 per cent. respectively."

The implication of this fact is obvious. As " The Economist " says, " it is to be hoped that the Government will take advantage of the low level of building costs and interest rates."

There is great need for these facts to be made more generally known. Subscriptions to the " Build Now " campaign of the Building Industries National Council should be addressed to the Hon. Treasurer, at 5 Duke Street, Adelphi, W.C.2, and should be made payable to " The Special Committee for Public Relations."

ULSTER HOUSING BILL

The Ulster Housing and Town Planning Bill has now received the Royal Assent. The Bill's main provision is the granting of subsidies of £25 each by the Government and the local authorities to builders of houses not exceeding 550 superficial feet.

MANCHESTER SOCIETY OF ARCHITECTS

Mr. J. R. Adamson, F.R.I.B.A., in his presidential address to the Manchester Society of Architects on November 8, said : " Little as I like many of the manifestations of the so-called new architecture, it seems to have come to stay. The number of its adherents appears to be growing, and many who came to scoff are now staying to pray. I am sure, however, that the crude cube-like forms that at present characterize so much of it—with their harsh insistance on forced horizontality, punctuated with contrasting slashes of vertical motives, which seem to be considered equally suitable as expressing the spirit of a civic building, a factory, a church or a fire station—the whole only too reminiscent of Lotts bricks and the nursery floor—cannot for long satisfy the cultivated adult taste of a great people. Such initial characteristics must be lived down, must be softened to some elegance of treatment, and touched with that something ' more ' to awaken the imagination and hold an abiding interest."

LEVERHULME RESEARCH FELLOWSHIPS

The following awards have been made by the trustees of the Leverhulme Research Fellowships : Miss E. Denby, organizing secretary of the Kensington Housing Trust, Ltd., has been granted a Fellowship to study slum clearance and rebuilding at home and abroad ; and Miss D. A. E. Garrod, M.A., a Cambridge archæologist, has been awarded a Fellowship in connection with the excavation of palæolithic cave sites on Mount Carmel, Palestine.

BLACKBURN CATHEDRAL

The Bishop of Blackburn announced last week that plans had been prepared for the enlargement of Blackburn Cathedral. The cost, he said, would not greatly exceed £150,000, and the present building would remain as the nave of the new cathedral. Mr. W. A. Forsyth, F.R.I.B.A., is the architect.

LECTURE BY DR. NEURATH

Dr. Otto Neurath, of the Mundaneum Institute, Vienna, gave a lecture last Tuesday evening at the School of Hygiene and Tropical Medicine in Keppel Street, W.C. The lecture was on the subject of " Pictorial Statistics for Housing and Town Planning," and was arranged by the MARS (Modern Architectural Research) Group, who entertained Dr. Neurath at dinner beforehand.

Dr. Neurath explained the application of his system of pictorial statistics to this subject and illustrated the symbols he has designed for the purpose with lantern slides.

INSTITUTE OF LANDSCAPE ARCHITECTS

Mr. E. Prentice Mawson, F.R.I.B.A., M.T.P.I., in his presidential address at the annual meeting of the Institute of Landscape Architects, held in London on November 7, pointed out that after a lapse of a little more than three and a half years from the commencement of their activities as a Society, they found themselves firmly established and with a membership of over fifty.

Discussing the future he said : " Upon what lines shall our Society press forward in the immediate future ? I had before me as I prepared this address quite a large budget of press cuttings, all dealing with the preservation of rural England, by the reservation of national parks or, on the other hand, rendering those wild, open spaces which already exist easily accessible to all who care to visit them. This, to my mind, opens up a large field for exploitation, large enough, indeed, to absorb most of our activities during the coming year. It seems obvious to me that if we can identify ourselves with all the really practical among the movements to that end which are already in the public mind, and intensify them by giving them proper purpose and direction, we are much more likely to accomplish something really useful than if we try to inaugurate some other lines of advance which have as yet no popular backing."

CARDIFF CIVIC SOCIETY

The first meeting of the Cardiff Civic Society was held recently, under the chairmanship of the Lord Mayor (Alderman C. F. Sanders).

The objects of the Society are as follow :—

"To promote a fuller understanding of the historical growth of Cardiff and assist in the preservation of places of historic interest or natural beauty.

"To advocate the maintenance of high standards in design in all buildings.

"To encourage the acquisition of open spaces and the brightening of public places.

"To exercise vigilance to prevent acts of vandalism.

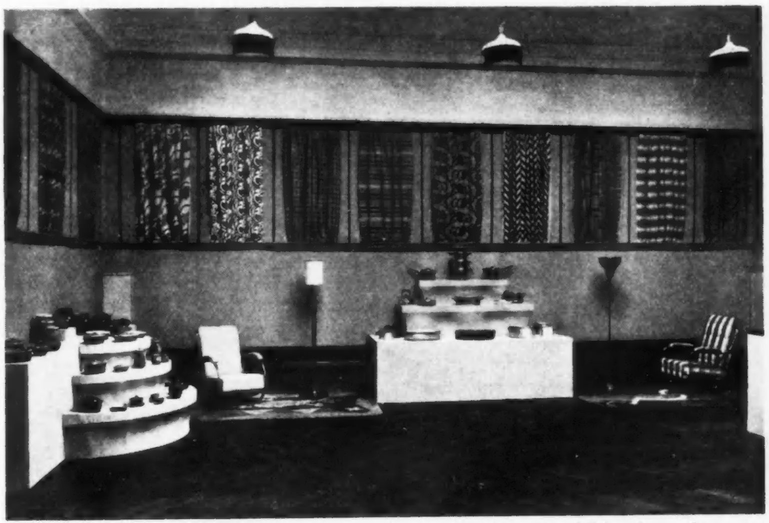
"To work for a more beautiful city by stimulating a pride in Cardiff's achievements and by co-operating with the civic and educational authorities, the National Museum, and other bodies for the development of local art and industry and pride of city."

The Society will carry out these objects by representations to those concerned, by private negotiations, by letters or articles in the press, by exhibitions, lectures and competitions.

The Marquis of Bute is the President of the Society, and the Executive Committee includes Messrs. Percy Thomas, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. (President of the Town Planning Institute). Mr. W. S. Purchon, A.R.I.B.A., is the Secretary.

THE CHARTERED SURVEYORS' INSTITUTION

Mr. P. F. Tucker, in his presidential address to the Chartered Surveyors' Institution on Monday last, said : "The injustice of Section 46 of the Housing Act, 1925, has been ventilated by more than one of my predecessors in this Chair, and for that injustice more than one Minister of Health has promised a remedy. Sir Hilton Young himself referred to it at Birmingham last month in his speech on slum clearance to the Conference of Conservative Associations. He promised, if I read his remarks aright, that his administration of the Housing Act of 1930 would provide adequate compensation for property which, though situated in a slum, is in good condition. So far, so good, but fair compensation is not possible under the Housing Statutes as they now stand. The law requires amendment, so that the test whether or not compensation shall be paid on a market value basis shall be made to depend on the condition in which the owner has kept the premises affected, and not on their environment."



In the Central Art Gallery, Manchester, where a selection of exhibits from the recent exhibition, in London, of industrial art, has lately been shown.

EDINBURGH ARCHITECTURAL ASSOCIATION

At a meeting of the Edinburgh Architectural Association, the following five members were elected :—Mr. G. L. Martin, A.R.I.B.A., as Fellow ; Messrs. James Broom, T. L. Dorrance, James Drummond, A.R.I.B.A., and G. M. Cairns, as Associates.

R. I. B. A.

COUNCIL MEETING

Following are some notes from a recent meeting of the Council of the Institute :

The R.I.B.A. New Building : On the recommendation of the New Building Committee and the Finance and House Committee it was agreed to build an additional ten rooms, viz., four on the second floor and six on the third floor, at a total cost of not more than £2,000.

The R.I.B.A. Statutory Examination for District Surveyors, October 1933 : On the recommendation of the Board of Architectural Education the following candidate who sat for the examination was passed : Mr. A. T. Alkin.

The R.I.B.A. Examination for Building Surveyors, October, 1933 : The Board reported that three candidates had sat for this examination, and on their recommendation the following candidate was passed : Mr. J. T. Finch.

The British Waterworks Association : Standing Committee on Water Regulations : Mr. H. D. Searles-Wood [F.] and Major C. F. Skipper [F.] were reappointed to represent the R.I.B.A. on this Standing Committee.

The Death Watch Beetle : Its Treatment and Study : Mr. Alan E. Munby [F.] was appointed to represent the R.I.B.A. on a Committee set up by the Society for the Protection of Ancient Buildings to consider the Treatment and Study of the Death Watch Beetle.

Departmental Committee on the Cost of Hospitals and Other Public Buildings : The Departmental Committee appointed by the Minister of Health to consider and report on the question of the capital cost of construction of hospitals and certain other buildings, have invited the Institute to furnish a written statement of evidence on the subject and to give oral evidence in support of the statement should this be desired. The following *ad hoc* Committee has been appointed to prepare a statement of evidence : Messrs. C. Ernest Elcock [F.] ; E. Stanley Hall [F.] ; L. G. Pearson [F.] ; H M. Fairweather [F.] ; T. A. Lodge [F.] ; and J. M. Theobald (Quantity Surveyor). Mr. Elcock is acting as Chairman and Convener of the Committee.

The London Diocesan Fund and the Honorary Advisory Committee of Architects : On the recommendation of the Practice Standing Committee and after consultation with the members of the Honorary Advisory Committee of Architects, the Council have submitted certain proposals to the London Diocesan Fund for the amendment of the London Diocesan Fund Regulations governing the appointment of architects.

The Chairman of the Competitions Committee : The Council approved the recommendation of the Executive Committee that steps should be taken to amend the Bye-laws to enable the Chairman of the Competitions Committee to be an *ex-officio* member of the Council.

The Slum Clearance Committee : Mr. E. Maxwell Fry [A.] was appointed as an additional member of the Slum Clearance Committee.

The Professional Conduct Committee: Mr. W. H. Ansell [Vice-President] was appointed as an additional member of the Professional Conduct Committee.

The Town Planning and Housing Committee: Mr. R. Barry Parker [F.] was reappointed as a member of the Town Planning and Housing Committee.

Transfer to Associateship: The following architect was transferred to the Associateship under the provisions of the Supplemental Charter of 1925: Mr. Ernest Wall Winks.

Reinstatement: The following ex-members were reinstated: As Associates: Messrs. Frank R. Foster, Arthur H. Gale, Arnold Lowcock, Raymond Myerscough-Walker and Gordon Stephenson.

Transfer to the Retired Members Class: The following members were transferred to the Retired Members Class: As Retired Fellows: Messrs. Arthur Crow, Howell Prosser and Arnold Dunbar Smith. As Retired Associates: Messrs. Archibald Gillespie and Henry Grieves. As Retired Licentiates: Messrs. Frederick Arthur Huntley and John Llewellin Smith.

Resignations: The following resignations were accepted with regret: Messrs. W. D'Arcy Cathcart [F.]; R. Pierce [F.]; B. A. Porter [F.]; H. R. Coales [A.]; A. S. Dunn [A.]; H. N. Fisher [A.]; G. T. Wellburn [A.]; H. J. Laws [L.]; W. M. Lewis [L.]; H. E. Nicholls [L.]; R. A. Nunn [L.]; O. P. Parsons [L.]; W. Goodwin [Retired L.]; and G. F. Miller [Retired L.].

Election of Students: The following probationers were elected as students of the R.I.B.A.—Architectural Association: Messrs. M. J. H. Bunney, D. M. Dent, G. Durand, R. H. Francis, H. N. W. Grosvenor, (Miss) B. Henty, C. J. Keates, F. C. Kell, (Miss) A. W. Parker, E. V. Tibbitts, R. S. Tubbs, (Miss) R. M. Waterlow, H. W. Wesley, N. C. Westwood and P. D. Wooton. University of London: G. A. Crockett, A. J. Prior, J. Y. Stoneham and L. T. Wilkins. Northern Polytechnic: G. L. Broadhead, S. H. Fisk, L. M. Griffiths, F. P. Harrison, J. R. Kane, R. V. Leathcroft, R. F. Lomax, H. J. Stantihall and H. G. Wiles. University of Cambridge: F. H. Brown. Armstrong College, Newcastle-on-Tyne: J. A. Dorin, H. A. Hill and J. Holt. Sir J. J. School of Art, Bombay: H. J. Billimoria, K. J. Burjo-Behram, K. Kotasthane, J. Panchal, R. Pastakia and J. Talpadé. Glasgow School of Architecture: G. H. Hamilton, J. G. McKenzie, A. McGraw and R. M. Young. Leeds College of Art: G. L. Taylor, C. Watson and F. Wilkinson. Special Exemption: J. F. D'Esté, A. N. Harris, T. S. Morris and H. J. Spence-Sales. Welsh School of Architecture: J. F. Hall, D. W. Roberts and A. S. Thomas. Secured Approved Qualifications from the Dominions: (Miss) W. A. Hall, P. Heugh, A. Murray and W. Williams. School of Arts and Crafts, Southend: J. D. Hill. University of Manchester: J. W. Holgate, R. D. Lawson, James Schofield and H. Williams. University of Liverpool: S. Leonard, B. Peters, L. B. Thearle, G. C. Timmis and R. le R. White. Nottingham School of Architecture: A. Swift. Robert Gordon's Colleges, Aberdeen: R. Thomson. University College, Dublin: M. J. McDermott. Auckland University College: W. R. Simpson.

REGISTRATION

The R.I.B.A. have issued the following statement: "The year ending on December 31, 1933, is the period laid down by Parliament for the admission of architects to the Statutory Register created by the Act of 1931.

"It is already clear that the movement has been a great success. It has been an immense task to deal in so short a period with thousands of applications, every one of which had to be carefully scrutinized by an expert Committee and approved by the Registration Council, but the greater part of the work is now done, and only some two months remain during which the balance of applications can be received and dealt with.

"The great majority of the members of the R.I.B.A. have already applied, and the names on the Register are a striking indication of the way in which the leading men in the profession are supporting the movement—the fruit of so many years of patient campaigning by the R.I.B.A.

"With one exception every member of the Council of the R.I.B.A. has sent in his application.

"Practically all the members of the Standing Committees of the R.I.B.A., the Board of Architectural Education and all the other Boards and Committees which carry on the administrative and educational work of the R.I.B.A. have applied.

"The members of the Allied Societies' Conference, representing no fewer than 63 allied and associated societies of architects in England, Scotland, Wales and Northern Ireland, have come in almost *en bloc*.

"It would be difficult to find a parallel in any profession for such a rapid and effective piece of organization. The architectural profession has shown its determination to take advantage of the privileges conferred upon it by Parliament when the Act was passed."

OBITUARY

C. E. VARNDELL

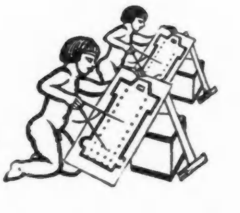
We regret to record the death, in his 58th year, of Mr. C. E. Varndell, F.R.I.B.A., the principal architect to the Commissioners of Crown Lands. Mr. Varndell was for many years a lecturer at the Architectural Association. In 1900 he was Grissell Gold Medallist of the R.I.B.A., becoming a Fellow of the Institute in 1916. He had been a Fellow of the Chartered Surveyors' Institution since 1913.

His work included the designs of new blocks of flats in the Cumberland Market area on the Regent's Park estate for the rehousing scheme of the Commissioners.

G. P. K. YOUNG

We regret to record the death of Mr. G. P. K. Young, F.R.I.B.A., J.P., senior partner of the firm of Messrs. G. P. K. Young and Partners, of Perth. Mr. Young was a native of Perth, and after receiving his education at Perth Academy and the Slade School, London, he joined his father in the firm which had been founded by his grandfather. He served for three years as president of the Royal Incorporation of Architects in Scotland.

COMPETITION



NEWS

BEXHILL COMPETITION

The latest date for submission of designs in the Bexhill Competition has been changed to December 29.

Competitions Open

December 15.—Sending-in Day. Messrs. Jenson and Nicholson invite designs for the decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1.

December 29.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor: Thomas S. Tait, F.R.I.B.A. Premiums: £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1. The conditions were reviewed in our issue for September 28.

No date.—Mr. J. P. Turner, J.P., of Cardiff, invites architects and town planners to submit designs for the lay-out of a building estate of about seven acres at Penylan Hill, Cardiff. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £100, £50 and £25. Conditions, etc., obtainable from E. Turner and Sons, Ltd. Penarth Road, Cardiff. Deposit £1 1s.

No date.—The Stoke-on-Trent City Council invites competitive designs for a proposed Mental Colony to accommodate 500 patients. The assessor is to be appointed by the President of the R.I.B.A. Premium £300. Copies of the proposed scheme and conditions of the competition are obtainable from E. B. Sharpley, Town Clerk, Town Hall, Stoke-on-Trent.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Proposed Extensions to the Town Hall, Swindon. Assessor: Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere A.R.I.B.A.

Proposed Town Hall and Municipal Buildings, Stoke Newington. Assessor: Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

EXHIBITION OF FINNISH FURNITURE

The outstanding work at the Exhibition of Finnish Furniture, opened at Fortnum and Mason's on Monday, November 13, by the Finnish Minister, is that by Alvar Aalto, who is best known in this country as the designer of the Sanatorium recently completed at Paimio, and illustrated in this JOURNAL *for October 5 last.*

The Exhibition has been organized by "The Architectural Review" with the co-operation of Fortnum and Mason, Ltd. All the furniture and models illustrated on the following pages, with the exception of those shown in fig. 9, are by Alvar Aalto.

ALVAR AALTO has experimented for three years with plywood as a medium for chair construction, and has now developed several types of chair to a stage at which they are fitted for mass production. He uses birch wood, since this is, excepting deal, the most common wood in Finland; and deal is not suited to bending or use in thin laminations. The wood is either waxed and polished, retaining its natural colour, or cellulosed bright blue or red. The chairs may be classified in four main categories: those that have pliant plywood seat and frame; those that have pliant plywood seat and rigid plywood frame; those that have

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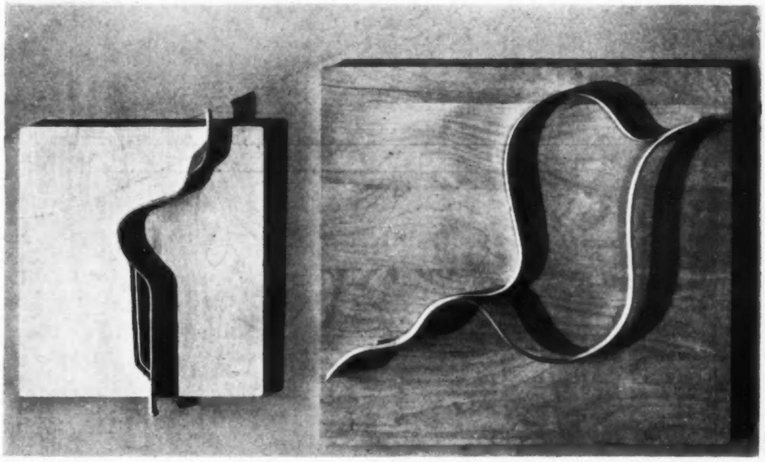
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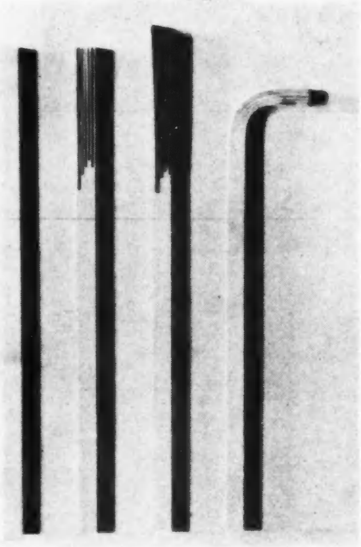
Single sheets of plywood may be sliced along part of their lengths and the divisions thus formed may be moulded in opposite directions. An application of this principle is shown in figure 14.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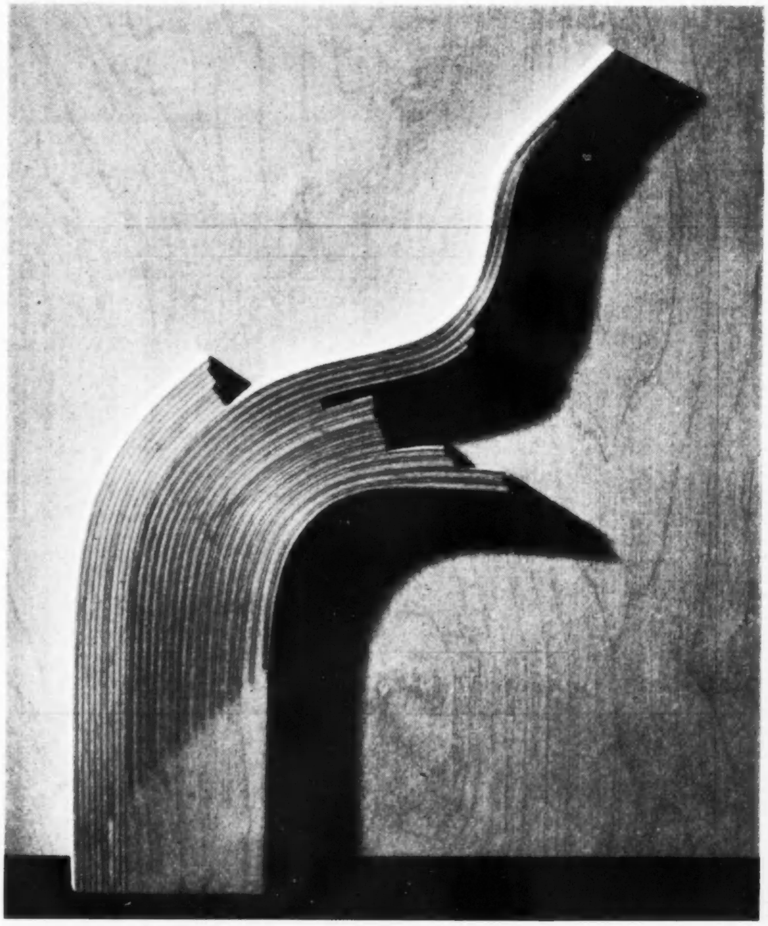
An illustration of the principle of slicing massive wood and inserting thin wood laminations to reinforce the material at bends. Applications of this principle are shown in figures 5 and 6.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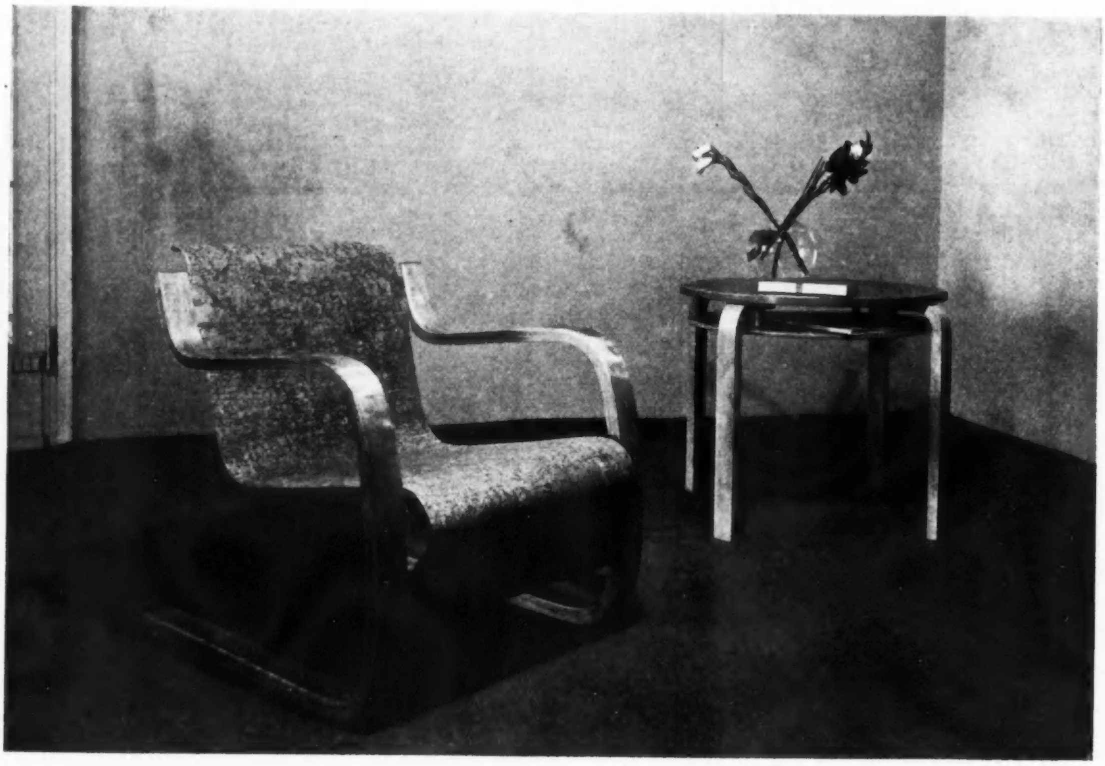
3. *Detail illustrating the pliability of massive wood reinforced by thin laminations; the grains run in opposite directions.*

EXHIBITION OF FINNISH



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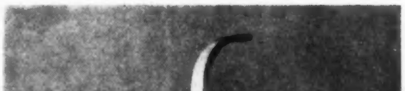

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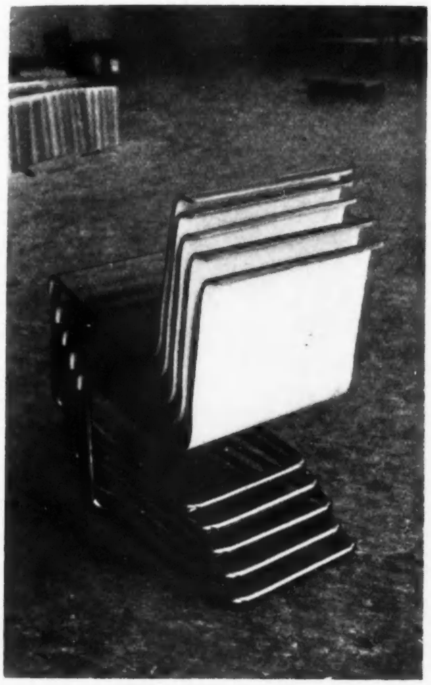
FURNITURE AT 181 PICCADILLY



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4. *An armchair with a moulded plywood seat slung from a moulded plywood frame. The seat is buoyant as a spring cushion, and the non-continuous plywood frame lends further resilience to the whole.*

5. *A stool with massive birch legs reinforced at the bends by thin birch laminations, see figures 1 and 3. The table shown in figure 4 is constructed in a similar fashion.*

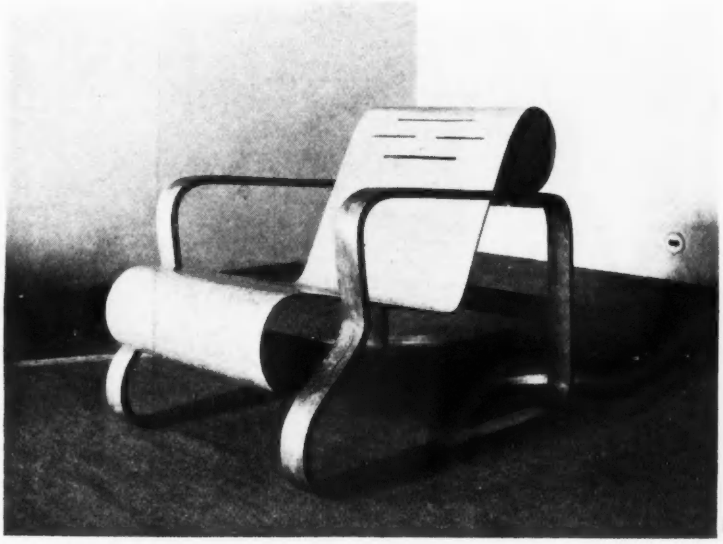
6. *A model illustrating the use of laminations inserted in massive wood to reinforce moulded bends.*

7. *Alvar Aalto's first composite nesting chair (1930), with plywood seat-backs mounted on continuous tubular spring steel underframes.*

8. *An armchair with a buoyant moulded plywood seat slung from a rigid moulded plywood frame.*

9. *Nursery chairs and tables with bright cellulose finish. Designed by Aino Marsio-Aalto.*

10. *Chair and table in moulded plywood. The chair has normal spring upholstery in place of the plywood seat-back.*



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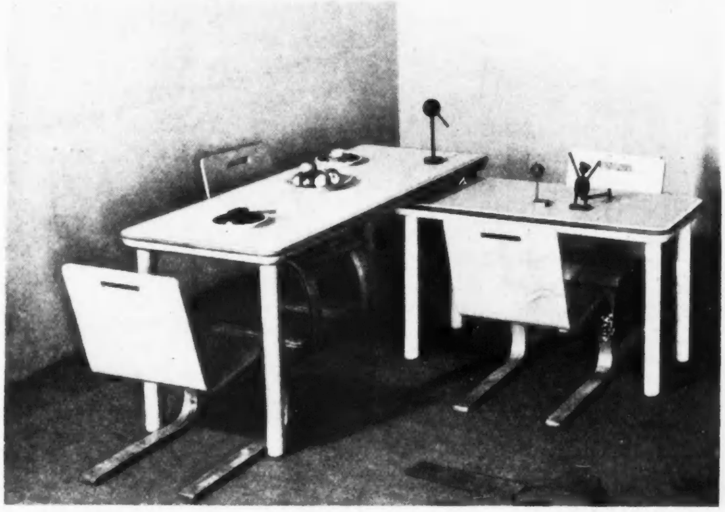

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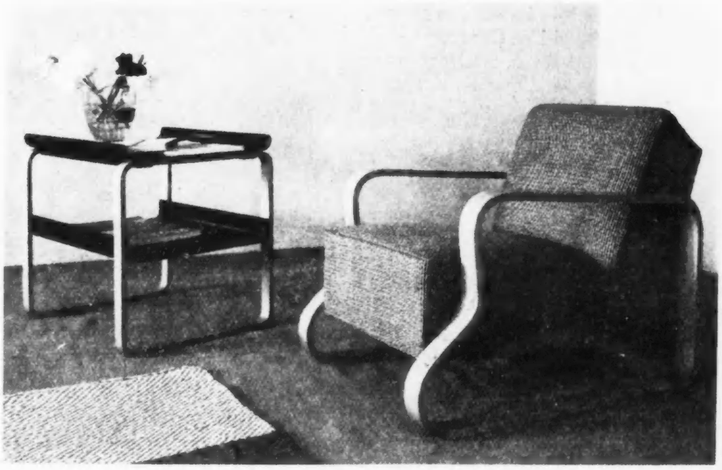

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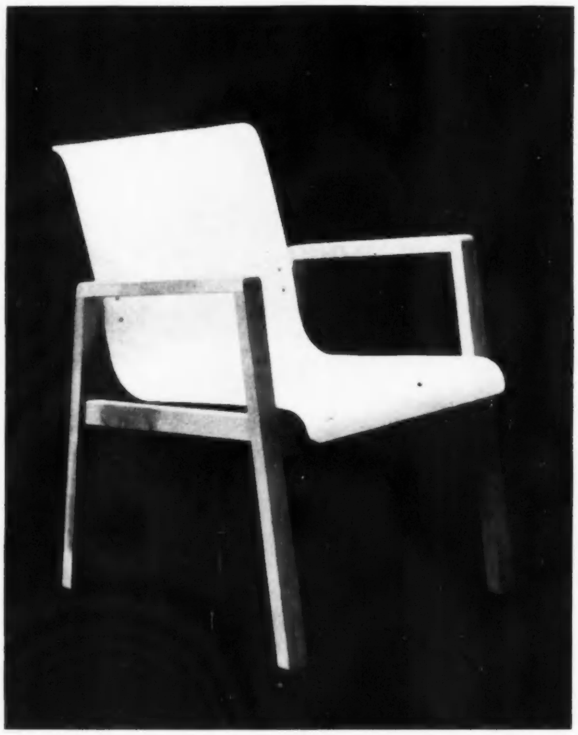
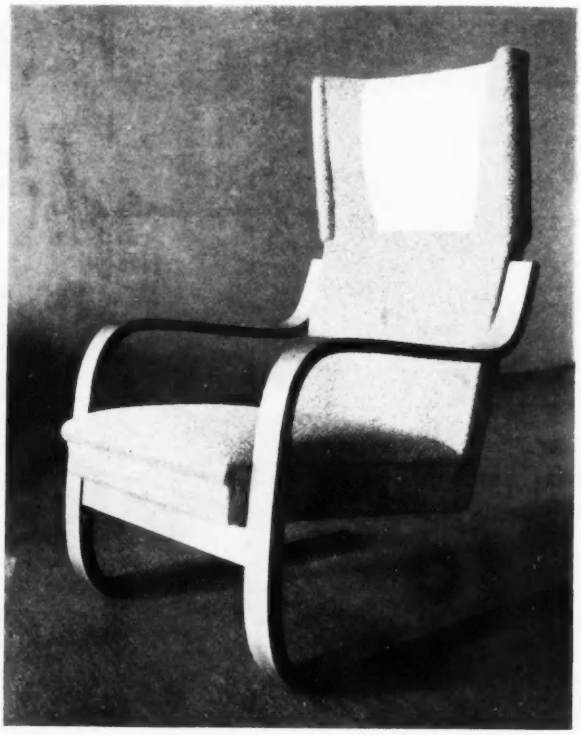
EXHIBITION OF FINNISH FURNITURE



11

A chair with a moulded plywood seat mounted on a box-jointed birch frame.



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High-back chair with upholstered seat and back mounted on a springy moulded plywood frame.

semi-rigid seat and pliant plywood frame; and those that have plywood seat and tubular spring steel frame.

The plywood for the seats is built up from fine birch veneers, limed and placed together in a moulding machine, so that the plies are pressed together to form a homogeneous sheet during the moulding operation. Since the actual jointing together of the veneers is coincident with the shaping of the sheet—i.e., since the composite seat has never had any other than its final form, there is no tendency for the finished seat to lose its curved shape.

The plies are held at the lower end of a built-up wood form, and are gradually pressed to its shape by a series of curved wood blocks, hinged together to form a "roll." The roll is pressed upon the plies and clamped down. Two or three complete moulded seats are made at a single pressing, the ply faces of each being separated by thin paper. They remain in the mould for two or three minutes, and are then withdrawn and placed in a hot-air chamber, and later in cooler air where they are cured for several days.

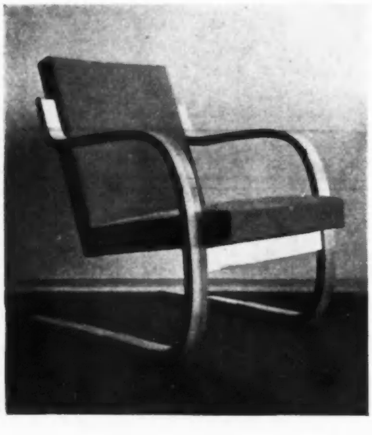
The frames are made from a greater number of plies, but are formed in a similar manner. Three or four frames are sliced from each composite pressing.

It is not necessary to use a composite wood for all types of work, and it may sometimes be economical—in the case, for instance, of the legs of the stool in Fig. 5—to use a piece of massive wood for the straight part, and to insert plies to reinforce the bend (see Figs. 1 and 3).

Aalto's chairs were the first to be made with pliant one-piece backs and seats mounted on resilient frames. The strength of the chair does not lie in the stouter plywood of the continuous arms and bases—which merely serve to transfer the load to the floor—but in the internal bending tensions of the plywood forming the seat back.

The chairs are comfortable and cheap; mass produced they should be among the cheapest, and provide a range hitherto unobtainable in this country. It seems that through a direct and intelligent use of modern materials, and the application of simple principles and methods in the design and manufacture of furniture, Aalto has been able to introduce a range of chairs and tables that, were they to depend upon selling price alone for their popularity, must have a very big market in any country where "modern" furniture is regarded generally as a luxury.

F. R. S. Y.



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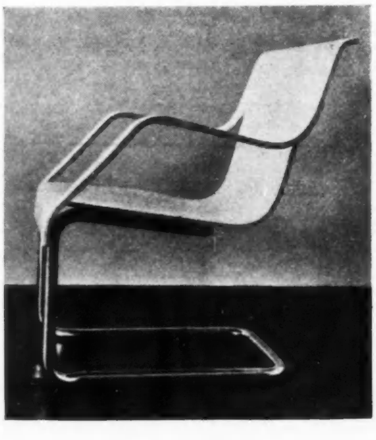

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13. Rigid-framed upholstered seat and back slung from a springy moulded plywood frame.

14. Moulded wood seat on tubular spring steel base. The seat and arms are formed from a single sheet of plywood, cut and moulded in the manner illustrated in figure 2.

LETTERS
FROM
READERS

E. A. A. ROWSE, A.R.I.B.A.

AN A.A. MEMBER

SIR GERALD GROVE, BART.

Height in Urban Buildings

SIR,—I am warned by my associates that I cannot allow Astragal's sprightly remarks to pass unanswered.

I recognize that private practice being competitive, both my lecture and my present reply to Astragal necessarily savour of the broadly vague. The slums, however, are so very much in our minds at present, that a misunderstanding of the exact difference between a " Cure for the Slums " and a " Solution of the Housing Problem for the City " may be forgiven. But the latter aspect does not confine its scope to one phase of life, or class, in the social structure. It must embrace all, or fail.

It seems necessary, therefore, once again to stress the undeniable fact that the entire populations of London and our great cities are being steadily driven down to accept so severe a loss of amenity as to constitute slum conditions.

Hence the " Housing Problem " embraces the rich as well as the poor ; especially does it include the unfortunate middle class, forced to occupy converted private dwellings at ruinous rents.

A problem so grave cannot be lightly attacked. Assertions made with no arithmetical bases soon crumble away, leaving their sponsor stripped before his accusers.

There exists under the problem of height, conditioned by the requirements of finance, population density, displacement and solar angles, mathematical relationship, which, when developed, gives a pattern wholly different in conception and expression from that achieved by Jeanneret for Paris. The first is as loose and elastic as the latter is rigid and formal. It is apical in character, as opposed to unbending uniformity. It accepts existing conditions in every detail, instead of devastating whole areas to reach a solution. It is human, not inhuman, recognizing the claims of the landowner, landlord and financier to consideration, as well as those of the poor to escape from the enervating influence of misguided philanthropy.

But to attempt to give details of this programme would require the scope of a book. Such an argument cannot be completely elaborated within the limits of a periodical, or an hour's discussion.

More especially is this the case when those who doubt its possibility may even fail to recognize the advantage which vertical transport has over horizontal, in the possibility of the application of the principle of the counter-balance to the reduction of running costs.

Public conveyance being necessary, factors which concentrate passengers at infrequent station points, free pavements of horizontal movement by the substitution of vertical, reduce time loss at all crossings, prolong the efficient life of machinery, are not likely to appeal the less to bodies like the London Transport Board, because they form facets of a larger programme, which seeks to release huge sums of money for constitutional purposes, prevent heavy monetary losses to the State, and reduce unemployment in the building and other industries.

As to what will occur on the twenty-fifth floor of the vertical, it is hard to see how it will differ much from that on the tenth, which the L.C.C. are determined to provide. Perhaps there will be a wider view, clearer air and more quietude, these being factors which are already raising the rentals of the higher storeys in office buildings. They may not be disadvantageous to the flat dweller of the future, more especially, perhaps, if they have just escaped from some of the dreadful dwellings which many of us have examined in various areas. If they do not wish to provide the fares from housing scheme to factory, or vegetate in a satelite town, no matter how suitable for the rural temperament, their appreciation is not likely to be diminished.

The arithmetic of such a programme must be of the most intelligent order. It must include building costs hitherto unheard of, constructional methods of revolutionary nature, finance on the broadest, most equitable principles. All shall be combined to create an even progression towards a solution that shall jar no one beyond the limits of their patience and co-operation.

There are two impulses which, each in their way, result in an expression of ideas, whether sincere or otherwise. One is born of conceit, the other of pain. The latter forces revolt to that pitch at which some cure, no matter how drastic, is desperately sought. Such a search is not undertaken in the spirit of self aggrandisement. Team work is too vitally necessary to success to permit of any one individual claiming the kudos. Each and all must borrow and add.

On the spirits of many of us the shadow of our cities lies heavily. The use of these greater machines is as little understood today as is that of the lesser. They are both equally abused. We can use neither safely, and with their increased magnitude goes a like power to cause suffering.

Later perhaps I may hope to have the pleasure of demonstrating to Astragal that arithmetic can be intelligently used to prove a point, and that density for density, acreage for acreage, vertical has the advantage over horizontal development on every count.

E. A. A. ROWSE

Astragal replies :—

SIR,—A good many wild suggestions, unsubstantiated either by clear thinking or sound figuring, have been advanced in favour of tower buildings as a solution of the slum-clearance problem. I have myself inspected schemes on paper which I could only consider, taking into account their authors' power to give them substance, to be in a high degree dangerous.

Long before the present pitch of slum-clearance enthusiasm was reached, I advocated the planning approach to the problem, and I confess that the cry of high towers raised in another quarter filled one with some alarm. I know that this solution is being considered by individuals and by groups. I feel conscious that it may emerge as a means of bringing about a new way of life to replace our existing muddled urbanism; and finally, and with a thankfulness I cannot over express, I welcome Mr. Rowse's reply to my " sprightliness " in an earlier issue. In the face of a letter compact of suggestion requiring time both to explain and to understand, I cannot do more than hope that we shall meet in a more private place to talk at greater length and to more purpose.

ASTRAGAL

The A.A. Competition

SIR,—As a member of the A.A., I would like to make one or two points in connection with the recent villa competition organized by the Architectural Association, which has been so severely criticized in your JOURNAL.

The aim of this competition was to give the ordinary jobbing builder and speculator some idea of the possibilities for refinement in the present crude villa product.

This particular type of building seems to have established itself securely, as is indicated by the erection of increasing numbers—which also suggests it is answering a definite need. Surely no professional snobbishness should stand in the way of improving the quality of the design of any building.

Architects are only too apt to stand

aloof on some high "art" pinnacle and forget the humbler human needs.

The knowledge and training of the architect should always be at the service of the community quite apart from personal predilections.

If by this competition the A.A. has been able to improve the standard of design of the class of building now represented by thousands of tenth-rate reproductions fouling our countryside and suburbs, it deserves all support.

AN A.A. MEMBER.

[*We have submitted the above letter to our Competitions Correspondent, the author of the article referred to, who sends the following reply.*—ED., *A.J.*]

SIR,—It is interesting to find a member of the Architectural Association willing to try to justify on paper his Association's recent unhappy incursion into the field of competition promoting. That more readers have not attempted to do so is explained, I think, by the arguments of *An A.A. Member* being already refuted in my article of a fortnight ago.

He defines the aim of the competition as "to give the ordinary jobbing builder and speculator some idea of the possibilities for refinement in the present crude villa product." But it is no contribution, as I there explained, towards the solution of the problem of this suburban crudity to attempt, however conscientiously, to substitute an architect's good taste for a speculative builder's vulgarity in the design of individual houses, when what is needed is wholesale reorganization on a planned basis. We will get nowhere by accepting as a basis of design a principle that itself stands in the way of a satisfactory solution of the problem.

A defeatist attitude that accepts the increasing numbers of this type of building as proof that it is now securely established is no less dangerous in the case of this particular epidemic than it would be in the case of an epidemic of small-pox or sleeping sickness; and the duty of the architect, as of the doctor, is to control the fever, not just to hold the sick man's hand.

The architect is only superior to the builder in the sense that he has a position of greater responsibility, of which he must take advantage not merely to improve the builder's taste but to give him a lead in an intelligent direction.

It is true, as *An A.A. Member* says, that these houses fulfil a definite need: but only the constant need of housing in some form, not a need of it on this haphazard system, the encouragement of which in the present will only make more and more difficult a civilized form of housing in the future.

I am able to agree with him most emphatically when he says that "the knowledge and training of the architect should always be at the service of the community," but, in that sentence, the "operative" word is, I think, *community*. My dictionary defines *community* as a number of persons living together for their common advantage. In which direction, individual exploitation or planning and control, that common advantage lies should, if only from examples before us, be clear enough.

YOUR COMPETITIONS CORRESPONDENT

The Grid

SIR,—English people who are familiar with American homes and know what a boon electricity is for lighting, heating and labour-saving devices on the other side of the Atlantic, will rejoice to learn that the Grid is nearing completion, and that, presumably, electricity at reasonable cost will soon be available to every householder in this country.

May I suggest, however, that before electricity can be of general benefit in our English homes, houses must be adapted or constructed in such a way as to make its use easy and convenient.

My own experience of English homes is that, even when they are wired for electricity, there is a deplorable lack of outlets, conveniently placed, such as readily facilitate the use of standard lamps, table lamps, portable heaters, irons, vacuum cleaners and the scores of handy "gadgets" so familiar in the United States.

It is true that the majority of English homes were built in the pre-electricity age, and consequently were not designed for it. But even many of our modern houses are equipped in a way which makes the use of electricity, even for lighting, far more difficult than it should be.

Perhaps our electrical undertakings will consider the point and see whether they cannot persuade architects and builders to construct flats and houses with a plentiful supply of electric plugs, encouraging the fullest possible use of the many accessories which can add so greatly to comfort and lighten labour in our homes.

GERALD GROVE

Rural Housing

Mr. W. Harding Thompson, F.R.I.B.A., contributed the third of the A.A.'s series of lectures on the housing problem at 34 Bedford Square, on Saturday last. Discussing the solution for the city, the lecturer said:

"Slum conditions exist in the country just as they do in a more intensified form in the great cities. But except for the incapacity of the tenant, both in urban and rural areas, to pay an economic rent, there is a fundamental difference between the habits, standard of life and outlook of the countryman compared with those of the city slum dweller. The rural worker is part of an agricultural community, often dependent on his own initiative to find fuel, to produce food from his garden or to contrive some primitive shelter against the elements.

"The agreed minimum weekly rates of pay for agricultural workers at the present time vary from 28s. per week in certain counties to 37s. 6d. in the more highly paid counties. On this meagre wage the farm worker must feed, house and clothe himself and his family. The countryman's cottage should not, therefore, exceed 3s. per week.

"Those of you who have visited the pair of cottages on the Aldwych site will know that these cottages, which were the result of the Building Centre Competition, represent the first serious attempt since the war to design inexpensive cottages suitable for erection in rural districts. The all-in cost per cottage was approximately £225, still, I suggest, too expensive to let to the rural worker on a wage of 27s. 6d. or 30s. per week, but quite possible for the more skilled workers in country districts. We must therefore reduce the cost of building or rely on a subsidy."

British Steelwork Association

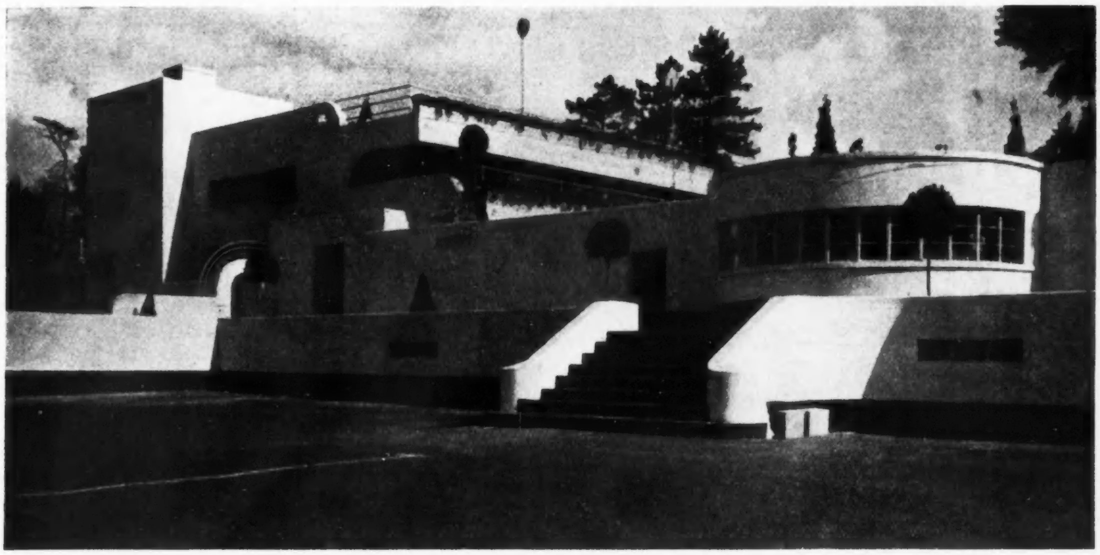
The annual luncheon of the British Steelwork Association was held in London on Friday last. Mr. Ben Walmsley, C.B.E., occupied the chair. The Rt. Hon. Walter Runciman, P.C., M.P., the principal guest, in proposing the toast of the Association, said: "You are now enjoying the benefits, such as they are, of import duties which certainly are assured to you for a short period, and which, in my view, are likely to be continued for a long period. The present Government has no intention whatever of withdrawing from you the support which an import tariff gives to you except on conditions which are known to your chairman.

"I dare not ask him to disclose all he has in his mind or all he may have learned in the last few months, but the investigations in which he has taken part have made it clear that if the iron and steel industry is to get the full advantage out of our present national policy, it must have some assurance as to the future.

"No matter what may be the result of the next election, I prophesy that our successors —if we have any—will certainly not undo what we have done."

Other speakers included Mr. Ben Walmsley, Mr. William MacLellan, C.B.E., J.P., Sir Henry Maybury, G.B.E., K.C.M.G., and Sir William Ray, M.P.

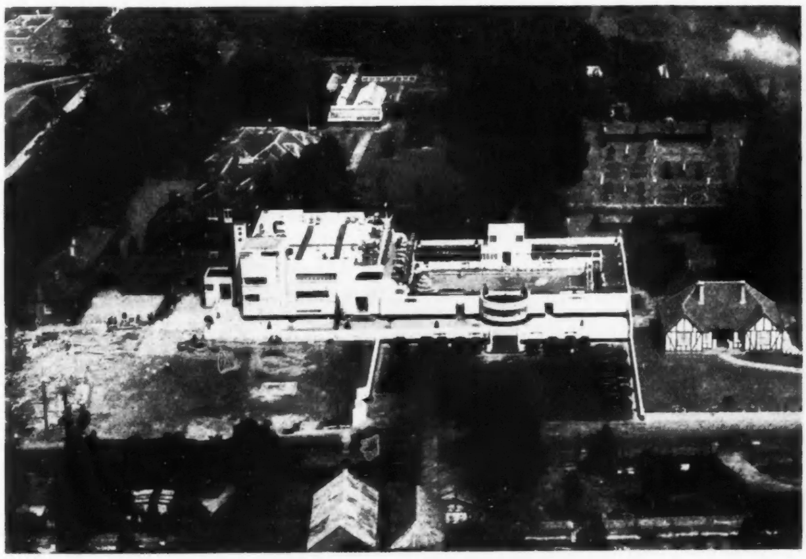
THE SHOWBOAT, MAIDENHEAD



The entrance (south) front and terrace, taken from the car-park.

The Showboat is a road-house consisting of a large swimming-pool, a restaurant and ballroom, tea and sun-bathing terraces, and a club-room and bar. It was designed after a study for the purpose of the most recent continental bathing pools, and erected this summer in the remarkably short time of eleven weeks, by 200 men working day and night. It is constructed throughout in reinforced concrete.

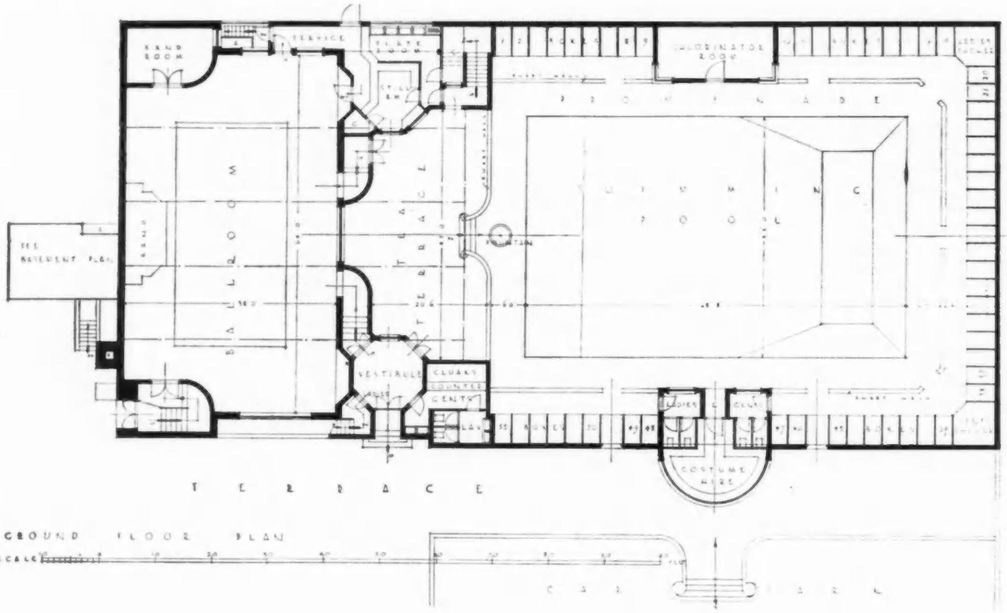
The open-air swimming-pool, which measures 68 ft. by 43 ft., and varies in depth from 2 ft. 6 ins. to 8 ft., is finished internally in black and mottled grey tiles. The fountain at the shallow end also serves to aerate the water, which is passed through it after leaving the filtration room in the middle of the north side. There is full diving-board equipment, and shower baths are provided in connection with the dressing boxes.

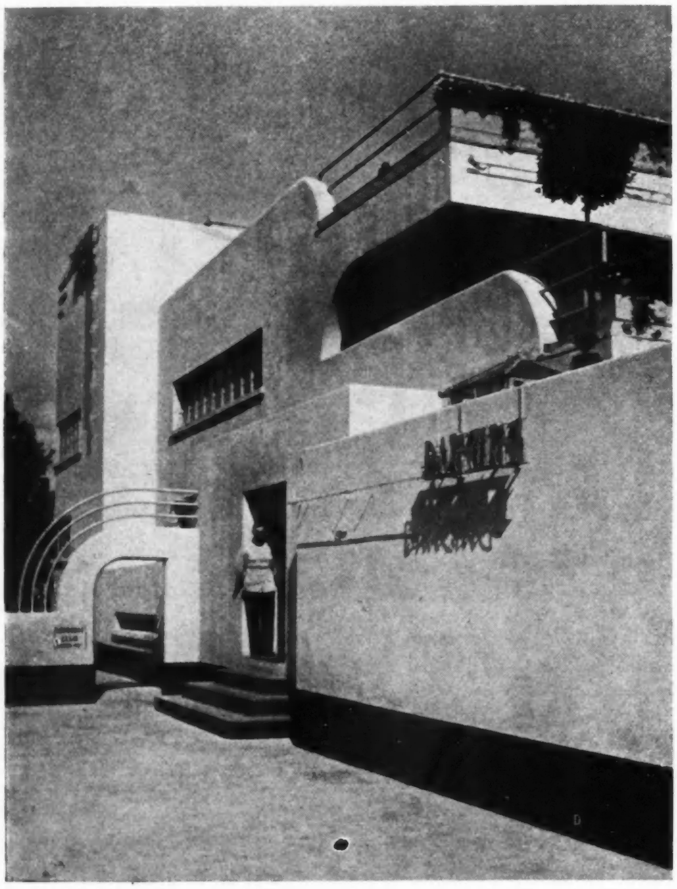


An aerial view from the south.

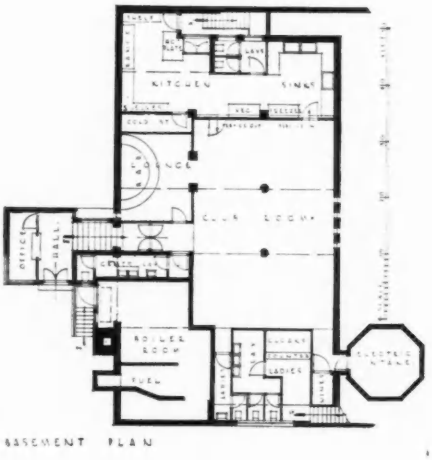
BY D. C. WADHWA AND E. NORMAN BAILEY

THE SHOWBOAT, MAIDENHEAD:

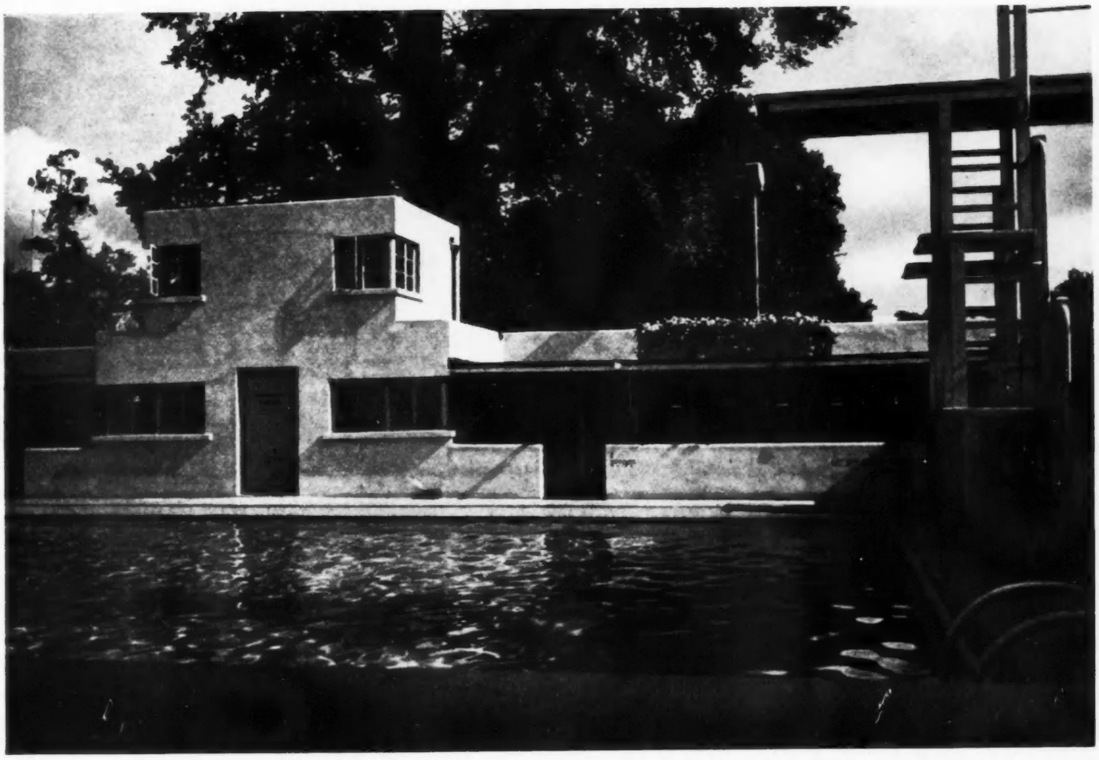

BAND ROOM
SERVICE
PLATE ROOM
STILL RM
BOXES
CHLORINATOR ROOM
PROMENADE
BALLROOM
BAND
SEE BASEMENT PLAN
TERRACE
SWIMMING POOL
FOUNTAIN
VESTIBULE
CLOAKS
COUNTER
GENTS
LAV
LADIES
CLUB
COSTUME HIRE
TERRACE
GROUND FLOOR PLAN
SCALE
CAR PARK

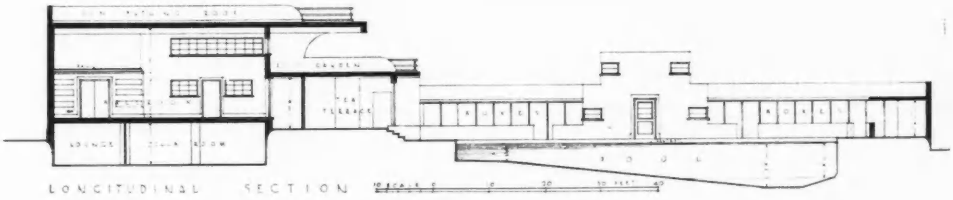


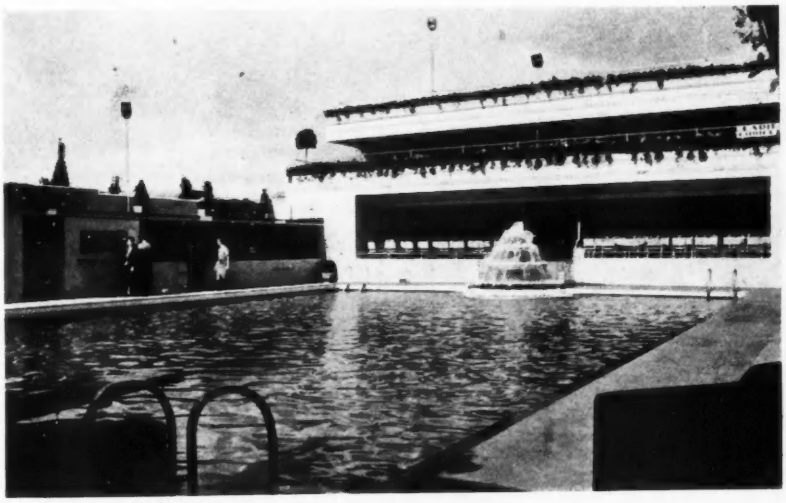
Main floor plan and basement plan; and a view of part of the main entrance front, showing the steps leading to the entrance vestibule.


SHELF
PANTRY
HOT PLATE
LAVS
KITCHEN
SINKS
COLD RT
VEG
FREEZER
LOUNGE
BAR
CLUB ROOM
OFFICE
HALL
GENTS LAV
BOILER ROOM
FUEL
CLOAKS
COUNTER
LADIES
LAV
WINES
ELECTRIC INTAKE
BASEMENT PLAN

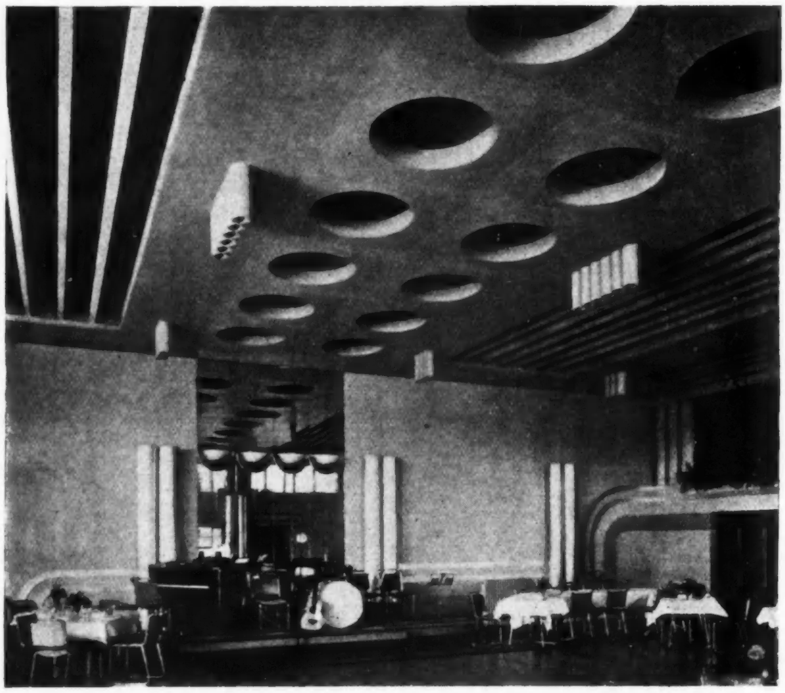
BY D. C. WADHWA AND E. NORMAN BAILEY




SUN BATHING ROOF
GARDEN
BALLROOM
TEA TERRACE
BOXES
BOXES
LOUNGE
CLOAK ROOM
POOL
LONGITUDINAL SECTION
SCALE 0 10 20 30 FEET 40



Top: The swimming-pool, and the building that houses the chlorinator and filtration plant. Longitudinal section through the ballroom, tea terrace and swimming-pool. Right: The swimming-pool and tea terrace.

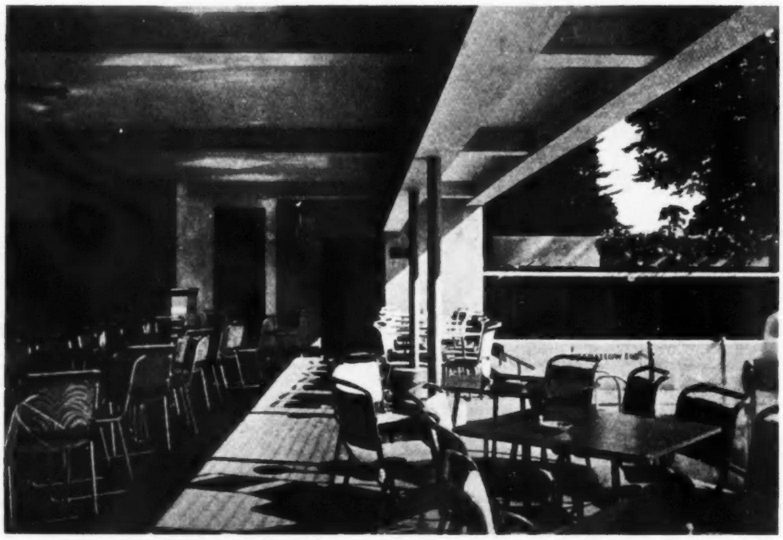


The interior of the ballroom, decorated in green, black and chromium. Indirect lighting is from the circular recesses, and the fibrous plaster tubes suspended from the ceiling.

THE SHOWBOAT, MAIDENHEAD

DESIGNED BY

D. C. WADHWA AND E. NORMAN BAILEY



The tea terrace at the west end of the swimming pool.

BUILDING CONTRACTS AND ARBITRATION

[BY A BARRISTER-AT-LAW]

OPERATION OF ARBITRATION CLAUSE

THE purpose of the insertion of an arbitration clause in a building contract is usually well understood by the parties, but it cannot be said that some effects of the legal operation of such a clause are always so clearly recognized, even by building owners and their contractors.

It may be stated that the application of the clause does not invariably result in the economy of time and expense generally supposed. On the whole, however, the principle of arbitration is, of course, unassailable, and the Arbitration Act, 1889, has been completely justified in its operation. But differences between those brought into contractual relationship are sometimes bound to arise. It is generally in those circumstances that surprise is caused by the discovery that, among the matters which may be put forward involving the loss of time and money, questions may, indeed, arise upon the arbitration clause itself as to whether the arbitration or award is a condition precedent to an action; or whether the agreement to refer disputes is a collateral and independent one.

In case it proves to be a condition precedent no action can be started until the arbitration has been concluded and the award duly made and published. To determine this question reference must be made to the contract alone, for its true legal construction and the real intention of the parties as expressed therein. The question whether or not a term in the contract amounts to a condition must be always a matter of legal construction to be answered by ascertaining the intention of the parties from the wording of that contract. In this sense the definition of a "condition precedent" may be shortly given, perhaps, as being a statement or promise, the untruth or failure of which discharges the contract; and it must not be confused with the word "warranty" which has another meaning and, speaking generally, is separate and independent of a condition, and is a more or less unqualified promise of indemnity against a failure in the performance of a term in a contract upon which it is unnecessary to say anything further. But if in a particular contract there appears, for instance, first, a covenant to pay and, secondly, a covenant to refer, the covenants are regarded as distinct and collateral, and a plaintiff may sue upon the covenant to pay; in which case it is open to the defendant, if he so wishes, to apply under section 4 of the Act of 1889 to stay the action pending the hearing.

EFFECT OF ASSIGNMENT

An arbitrator, in the discharge of his judicial functions, cannot delegate such functions to another person unless he is expressly empowered so to do. Among the difficulties of his position the happening of an unexpected event sometimes causes him particular trouble and anxiety. It must be remembered that an arbitration clause is deemed generally to be a personal covenant, and, as such, rights arising thereunder do not pass with a general assignment as " Legal and other remedies " under section 136, sub-section 1, of the Law of Property Act, 1925.

An arbitrator, however, may have jurisdiction to deal with the dispute even although one of the parties has divested himself of his rights; yet the arbitrator must not only have regard to the limits of the contract but also to a duty which is upon him to consider its terms, having regard to the legal position caused by its assignment.

In a certain case where a firm of building contractors assigned all the benefits of their contract to a bank, or, in arbitration proceedings, brought a claim for final settlement of their account, the defence was put forward that the contractor was not entitled to claim any moneys whatsoever because of his act of assignment. An award was made in the form of a special case for the opinion of the Court. It was submitted for the employer that the contractor could not, by virtue of the Law of Property Act, 1925, submit to arbitration, but that his assignee, the bank, could do so. On the contractor's behalf it was submitted that the arbitration was an integral part of the contract by which means the amount due under it was to be ascertained; that the arbitrator was bound to express his view in the terms of the contract; and that the proper remedy for the assignee would be that the bank should bring an action upon the award, with the result that it might have to accept a charge instead of a mortgage. The question on the special case stated in the matter was whether the assignment mentioned precluded the contractor from maintaining his claim.

It is, unfortunately, only possible in a short article to discuss a few of the many questions connected with arbitration. But similar circumstances to those just mentioned sometimes arise during the progress of building or construction work which were never anticipated at the formation of the contract, and it may be helpful, therefore, to give a summary of the judgment delivered in this case. The learned judge stated that an arbitration clause is a personal covenant and cannot be transferred; in this case it was not, and, if there had been a cross-claim, as, indeed, there might have been by the employer against the contractor, the arbitration clause would have remained in full force.

His lordship proceeded to point out that the arbitration clause remained in full force and effect as between the original parties in so far as they were entitled to go to the arbitrator under submission. " In such case the arbitrator appointed would be bound to entertain the claim and come to such conclusion as, upon the contract and the relevant legal considerations, he thought to be just and proper." The learned judge continued to say that " it was the duty of the arbitrator not merely to consider the terms of the contract within the limits of the document, but to consider also the application and enforcement of the terms having regard to the legal position which the parties had created; the contractor had divested himself of his right to claim the debt and the arbitrator knew of it. The arbitrator, in the alternative, had awarded a sum in favour of the contractor recoverable from the employer, who is not now his creditor and to whom the contractor could not give a discharge for the debt. The employer would still be liable to the assignee, the bank, in the same sum, and he could not plead fulfilment of the award by payment to the contractor as a defence to a claim by the bank."

Beyond this his lordship added that " an arbitrator may have to take into account, whilst acting under the clause of a contract, matters arising under the law generally, such as supervening illegality, or impossibility of performance, or frustration, and, in the same way, he cannot close his eyes to the fact that the claimant who comes before him to recover moneys has, in fact, assigned them by a valid legal assignment to a third party not represented in the arbitration." The learned judge accordingly held that the contractor in this case was not entitled to recover, and the costs of the arbitration and award were given in favour of the employer.

EMPLOYER'S ARCHITECT OR ENGINEER

In the past the architect or engineer employed by a municipal authority has been frequently made arbitrator in corporation contracts without further right of appeal, and our courts have held, in such cases, where the fact was known to the contractor when he tendered, that unless it could be proved that the official so appointed had shown himself by his conduct unworthy to adjudicate, there was normally no appeal. This unworthiness generally arose, where it existed, in the form of bias or prejudice evidenced in some way or another, and in such cases the Court promptly gave relief.

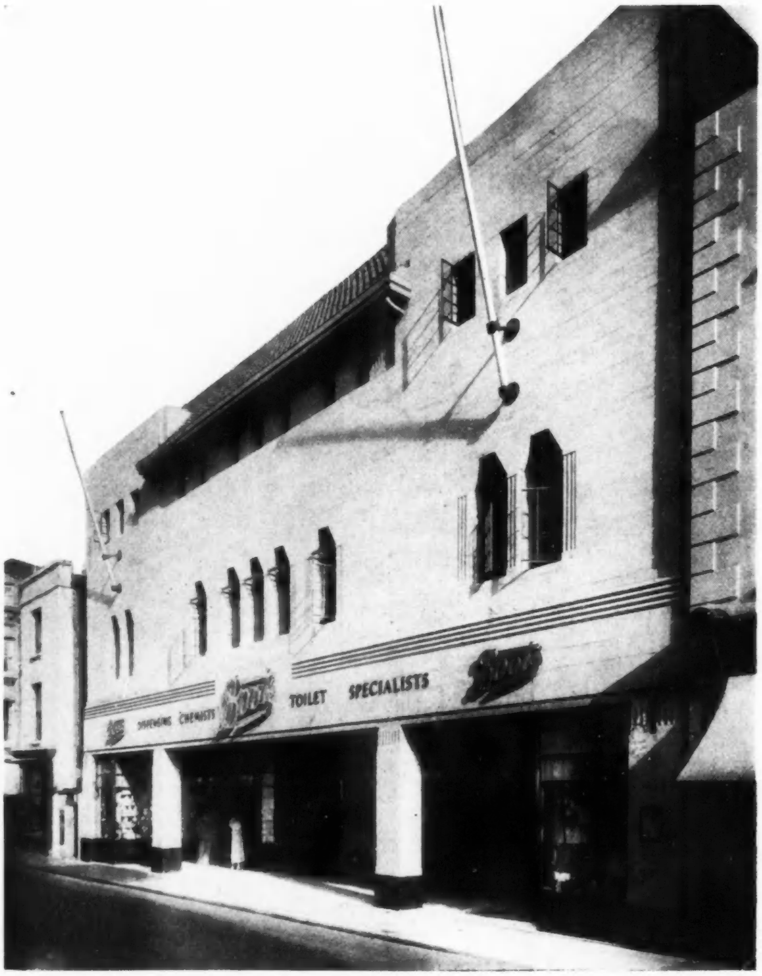
During more recent years there appears to have been a growing tendency in such contracts to nominate an independent third party as being more equitable in the interests of all concerned. It is a great tribute to present-day officials who followed the expression of recent judicial opinion in relevant cases, to find them just as willing, and, in fact, anxious, to have a third party to settle differences as the average contractor is himself.

However, if both contracting parties are entirely satisfied, as they ought undoubtedly to be at the outset, they are quite at liberty to submit their differences to the adjudication of an official of the contracting corporation. But, as previously indicated, if the person nominated shows bias or partiality, or if he has an interest in the subject-matter of the contract, this, in law, would amount to misconduct, and the Court, in the event of proceedings, would disqualify him from adjudicating.

DUAL POSITION

On this point the law was clearly expressed by a distinguished Lord Justice who said: " An engineer or architect under a contract is placed in two positions and he is allowed to assume them with the full knowledge of the contracting parties. In the one he is bound to do his best for his employer and to look sharply after the builder whilst the work is going on; and it is his duty in that capacity to form an opinion as to what his employer is entitled to while the works are being executed. The contract contemplates that differences may arise and the time may come when the engineer or architect should deal with them in his second position, in a different capacity, and then he has to do his best as an honourable man to determine judicially and finally questions between the parties."

CHEMIST'S SHOP,



The building is faced with reconstructed stone, which is considered particularly suitable for the weather resisting qualities required on a small island. The front roof is in green glazed pantiles, and the shop fronts are in green bronze with black granite stalls.

QUESTIONS THAT ARISE

Fixing Rain-water Pipe over Tile Hung Walls

¶ C. W. P. writes: "*Having been commissioned to design a house which shall be tile-hung for a considerable proportion of its height, I have been searching for information as to the way in which rainwater pipes, etc., are secured. Unfortunately, I have not been able to find any such details. Would your expert let me know what is the usual and correct method? If the usual clips or nails are used the tiles must be perforated, and I fear damp would penetrate; to put pads on the wall seems the only solution to me, but this would entail considerable trouble and expense both in flashing around and cutting the tiles to same.*"

The general practice is to perforate the tiles opposite the point where the fixings of the pipe-ears would come and to screw wood blocks to plugs and affix the ears thereto in the ordinary way. I have never had a case of penetration of damp from this cause. It is well to take thought so as to reduce the number of such fixings to the minimum (by avoiding needless joints), as they look rather clumsy. E. G.

Leaking Roof

¶ L. W. B. writes: "*My house has a flat roof 20 ft. by 40 ft. and is covered with asphalt on wood planking laid 10 years ago. There is one layer of felt on the wood and two coatings of asphalt (total thickness of asphalt ⅞ in.). Water has begun to penetrate the ceiling of the bedrooms beneath. There are cracks which do not go right through the asphalt, apparently following the seams of the planking, but no obvious cracks at the edges where the leakage seems to occur. Do you think it would be practicable to make a durable roofing by covering the existing surface with some bitumastic material, without going to the great expense of ripping up the whole roof and recovering?*"

If the leaking roof is covered with a three-ply bitumen felt, propped down with hot bitumen and finally covered with a layer of hot bitumen and gritted it should be good for a further term of years. If definite cracks could be discovered a cure might be effected without general treatment by applying the bitumen, covering an area 8 or 9 ins. on either side thereof with strong fine-meshed canvas pressed immediately and firmly down, and a second coat of hot bitumen following. See notes from B.R.S., No. 113. E.G.

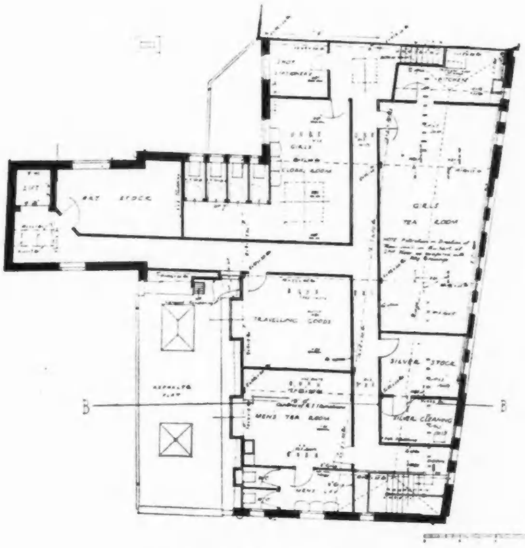
●

INDUSTRIAL CO-PARTNERSHIP ASSOCIATION

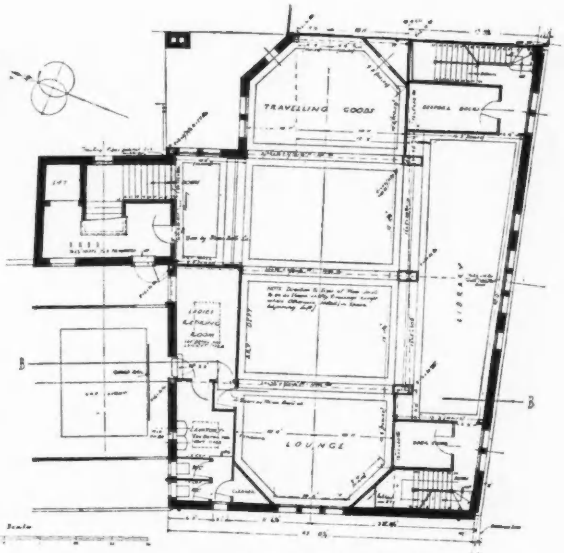
Speaking at a recent meeting of the Industrial Co-partnership Association, Mr. P. Malcolm Stewart, the Chairman of the Associated Portland Cement Manufacturers, Ltd., and other companies, said that profit-sharing forged a link which binds capital and labour and produced a changed atmosphere in which difficulties can be more readily dissolved. The movement was growing and a number of important manufacturers had set the example of giving their employees a partnership in industry and a share in the profits they had helped create.

Viscount Cecil presided.

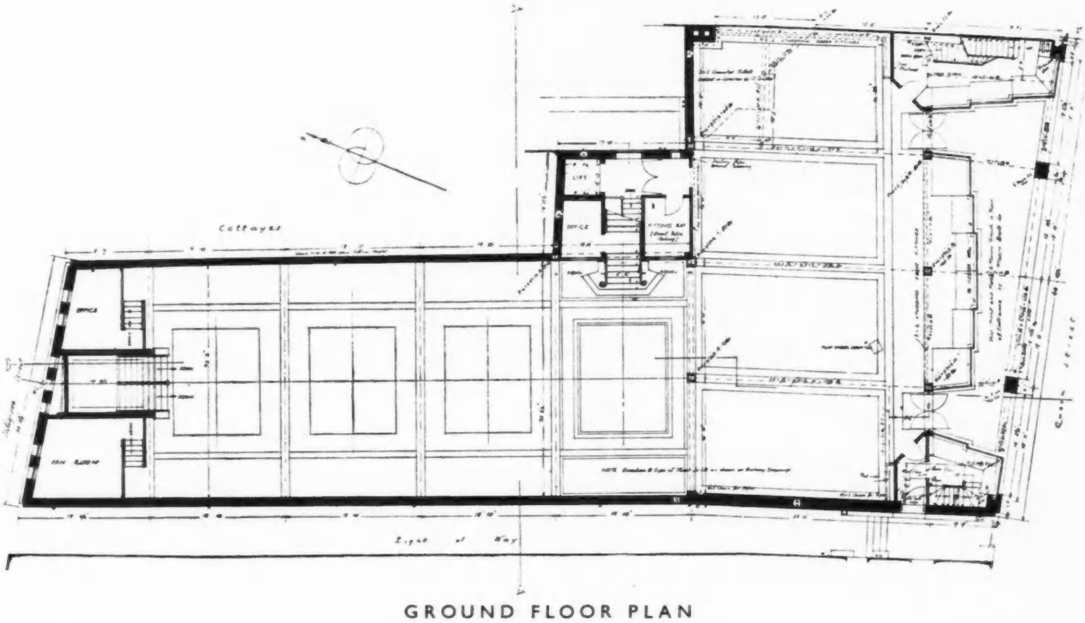
ST. HELIER, JERSEY, C.I.


LIFT
HAT STOCK
SHOP STATIONERY
KITCHEN
GIRLS CLOAK ROOM
GIRLS TEA ROOM
TRAVELLING GOODS
SILVER STOCK
SILVER CLEANING
MENS TEA ROOM
MENS LAV
ASPHALTE FLAT
B
B

SECOND FLOOR PLAN


TRAVELLING GOODS
LIFT
LADIES RETIRING ROOM
LAVATORY
LOUNGE
LIBRARY
CLEANER
B
B

FIRST FLOOR PLAN


Cottages
LIFT
OFFICE
OFFICE
Right of Way
B

GROUND FLOOR PLAN

Ground-, first- and second-floor plans. The basement, extending under the whole site, contains the unpacking and stock rooms. There is an arcaded type shop front and entrance on the main thoroughfare and a subsidiary entrance at the rear. The internal fittings are in Tasmanian oak and zebrano, with decorations (in which some use of plastic paint has been made) in cream, silver and green on the ground floor and in warmer tones on the first floor, with blue and green library shelving.

DESIGNED BY PERCY J. BARTLETT

LITERATURE

Haus K. in O. Garden room with electrically controlled sliding windows.
[*From* MARTIN ELSAESSER.

ELSAESSER

[*By Arpac*]

Martin Elsaesser. Bauten und Entwurfe aus den Jahren, 1924-1932. Bauwelt Verlag, Berlin S.W.68. Ullsteinhaus, 1933.

THIS book contains more than 300 pages of illustrations of buildings designed by Elsaesser during the last nine years, including several projects, classified in six sections: domestic houses, schools, churches, swimming baths, hospitals and office blocks, market halls and concert halls.

The Market Hall at Frankfurt, 1927, is perhaps Elsaesser's best known work; it is illustrated and described briefly in English. The greater part of the book is devoted to illustrations of the Haus K in O, built in 1930-1932, but reminiscent in its size and lavish treatment of the large houses of the nineteenth century; it has some dozen living rooms on the ground floor, in addition to an enclosed swimming bath, gymnasium and sound film theatre.

It is built in brickwork, faced with pale cream majolica slabs 45 cms. high by 25 cms. wide and insulated internally by cork plates 4 cms. thick. The roof is of wood joists covered by boarding, felting and copper sheeting. An air conditioning plant supplies fresh air to the principal rooms. The bronze windows to these rooms are electrically controlled and can be made to slide to open the living space entirely to the outer air.

SLUM

[*By Philip H. Massey*]
B.Sc. (Econ.), F.R.Econ.S.

The Anti-Slum Campaign. By Sir E. D. Simon. London: Longmans, Green & Co., Ltd. Price 2s. 6d. net.

THE purpose of Sir Ernest Simon's book is to criticize the present Government policy of concentrating upon the clearance of slums to the exclusion of encouraging the normal provision of houses, and to put forward what he regards as a practicable alternative.

Briefly stated, Sir Ernest Simon believes in the Wheatley Act, the Minister of Health in the Greenwood Act. When the latter of these was passed, it was intended to be used in conjunction with the former. Here, then, are three different points of view as to how the housing problems of the country can best be solved. The opposing views of different people on this aspect are not necessarily accompanied by opposing views as to the magnitude of the problem, or the magnitude of the work which it is practicable to carry out.

Simon does not plunge into attack. The book is admirably balanced, the greater part of it being historical or statistical in nature. The statistics are unimpeachable, though one may disagree in places with the interpretation placed upon them.

The history of post-war housing is well portrayed, and the author is unable to avoid the conclusion that the muddle is due to the alternations of Conservative and Labour Governments of diametrically opposed views.

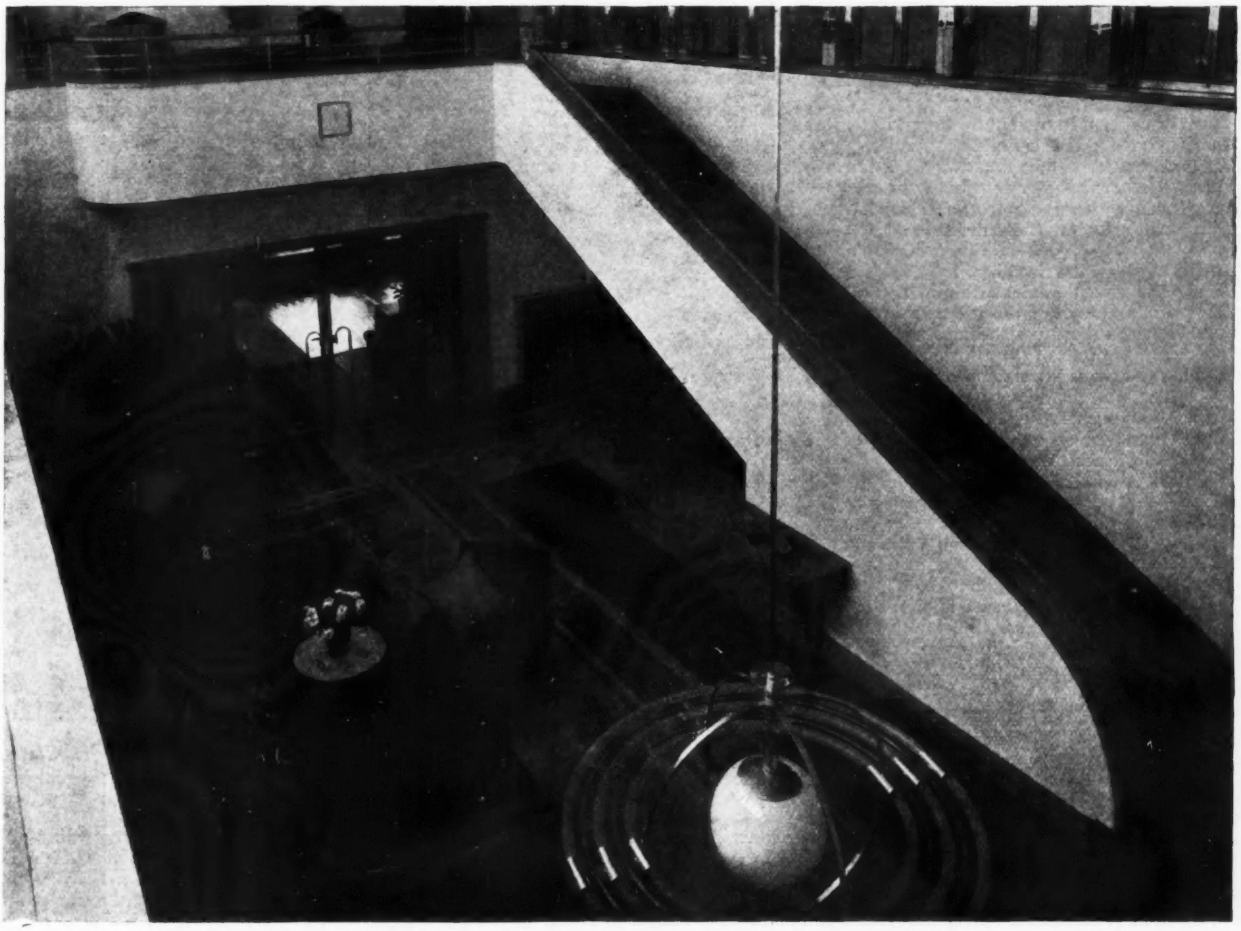
The 1931 Census figures are analysed to show that there is a shortage of 830,000 houses on the standard of one house per family. This deficiency has grown in almost every area since 1921; Birmingham has just kept pace with the increase in the number of families over the intercensal decade—many other areas, even areas in which the population has fallen—show an increase in the number of private families with which the provision of houses has not kept pace. The deficiency in the L.C.C. area has increased by 40,207, in Liverpool by nearly 4,000, in Manchester by 4,500. And it is estimated that in 20 years there will be 940,000 more families than now, and that four-fifths of this increase will take place in the next 10 years.

These considerations lead the author to an attack upon the whole basis of the present clearance campaign. It is necessary to emphasize that the attack is not based on the fact that the number of houses to be demolished appears to be inadequate. This has been said a number of times in the past few months. Simon is considering housing needs. His attack is an attack on a policy which fails to provide more houses, only seeking to provide better houses in place of those to be condemned. In face of the present shortage, and the certainty of a continuing increase in the number of families out of proportion to the population increase, the idea of demolishing a house for every one built (Simon would look at it that way round) fills him with alarm. A deficiency of 830,000 now, and an increase of 940,000 families to be expected in the next 20 years, taken together, means that 1,770,000 houses must be built, *and none demolished*, if we are all to live one dwelling-one family by 1951.

And these houses to be built if the Simon standard is to be adopted must, he insists, be offered at rents which the worker can afford.

Private enterprise must not be given the chance to repeat its misdeeds of the past:

"The local authority house is better planned, better built, better owned, and two shillings cheaper than the private enterprise house. And further, it is doubtful



Haus K. in O. The central hall with open staircase and landing approach to bedrooms. The floor, balustrade coping, and door surrounds are of polished grey limestone with grey-red veining ; the walls of grey-white marble stucco.

[*From* MARTIN ELSAESSER.

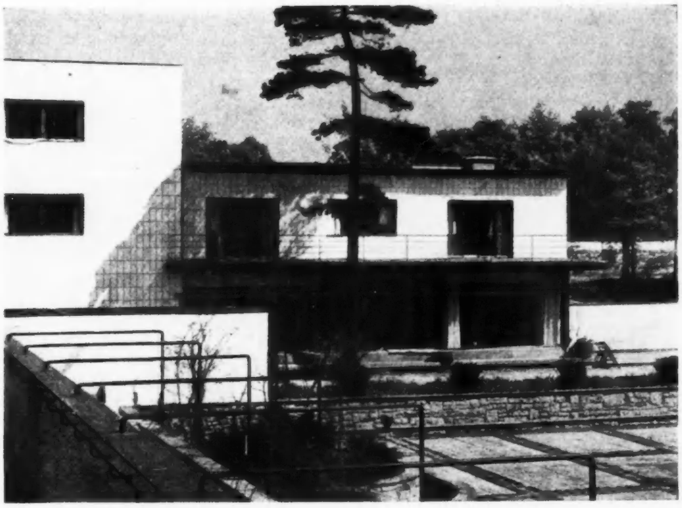
whether private enterprise is willing to build houses for letting at all."

We should adopt the principle of differential renting. Necessarily there will have to be a subsidy. Local authorities can now build A3 houses to be let at an economic rent of about 8s. 6d. per week exclusive. Taking the rates at 3s. 6d. this means 12s. inclusive. About half the houses can be let at this economic rent. The others should be let at 5s. to 10s., according to the means of the tenants. Adoption of the principle of differential renting means that it will be unnecessary to move families to smaller houses when their children leave home, provided that the family can then afford the economic rent of their house.

As to the number of slum houses in existence, the author points out that the only satisfactory definition of slum is that a slum is what the local medical officer of health says is a slum. This definition is the only workmanlike one.

Moreover, using the word in four different senses, four different estimates are given of the number of slum houses in England and Wales.

(1) The worst cellar dwellings	10,000
(2) Really bad houses in "courts"	100,000



Haus K. in O. Part of the south elevation with living room on ground floor and principal bedroom suite above.

[*From* MARTIN ELSAESSER.

(3) On basis of houses condemned in Manchester (These number 30,000)	1,000,000
(4) Houses that should be replaced	4,000,000

Most of us would not venture beyond (3). And Simon does not intend to clear any but the worst type of cellar dwellings and courts together with houses actually unsafe, until overcrowding has been abated—overcrowding being considered to exist where more than one family occupies a structurally separate dwelling.

There are three comments to make on all this. The estimates of the increase in the number of families over the next 20 years and of the number of slums in classes (1), (2) and (3) may be taken as correct. But

(a) Are we to consider overcrowding of more than one family to a house a greater evil than the continued existence of houses which fall into class (3)?

(b) Is it reasonable to adopt the one family-one house idea and to suggest that all houses occupied by more than one family should, within even 30 years, be demolished?

(c) Is it correct to say that 8s. 6d. exclusive equals 12s. inclusive?

Our answer to (c) must be "no." In many of the big provincial cities and in the poorer London boroughs 13s. 6d. would be nearer the mark.

As to (a) the general opinion would be that the two evils were about equal. Most people would, I think, take the view that about half of the class (3) houses should come down as soon as it is practicable. This policy and Simon's policy are not quite as opposed as appears at first sight. A considerable proportion of the unsatisfactory houses falling into Simon's (3) do contain more than one family. Take one which contains two families. Simon would rehouse one. Then perhaps the other could live in the better rooms of the house. But what about the rent factor. Surely it would be inequitable to house one family at whatever rent it could afford, leaving the other to inhabit a house which might be far too big for it, would almost certainly be too expensive, and is, by hypothesis, about as bad as the average of the 30,000 condemned houses in Manchester.

This brings out, incidentally, the fallacy of adopting the one house-one family analysis, which is the third point of issue. Before passing to that, it is important to realize that if the "clearance" policy is adopted, then in unfit houses which are also overcrowded, both problems are dealt with at once. In the example shown above, the last state of one of the two families, on the Simon plan, looks like being worse than the first. If the demolition policy is pursued, both are satisfactorily housed, in separate dwellings, the Simon standard is achieved, and the absurdity of the situation envisaged above is avoided. Therefore overcrowding and unfit conditions, where they exist together, are both dealt with at once. It is true that overcrowding in other than unfit houses is not cured by a slum clearance policy and is likely to be increased unless some new building is done as well.

In regard to point (b), Sir Ernest Simon, a Manchester man, regards a house, not structurally divided, which is used by more than one family, as necessarily needing to be replaced, though in the fairly far distant future. As a Londoner, this strikes me as amazing. Many thousands of middle class and working class people in London live in "flats" that are not really flats, but floors of a house, or in part-houses not structurally divided. In some cases where these houses are let to the upper and middle classes considerable reconditioning has been carried out in the shape of added bathrooms and so on, though separate front doors have not been provided. Such houses are satisfactory as used at present. In other cases reconditioning should be carried out to the extent of dividing the houses instead of merely leaving it as when occupied by one family. On this question the view of Londoners is naturally going to express itself because nearly three-quarters of the excess of families over dwellings at present is in the greater London area.

Consider the Simon policy in relation to the many thousands of unsatisfactory large houses in London, let off in parts to the working class and not structurally subdivided. Stage I is to rehouse all the families except one elsewhere. Stage II is to demolish what may be a perfectly good house.

These two considerations appear to me to show very plainly the need for a comprehensive policy which would take into account the very different conditions which similar statistics portray in different areas. The immediate clearance of slums on a bigger scale than that envisaged by Simon appears essential. The relief of overcrowding of persons to the room must be taken as at least as important as that of families to the dwelling. Where the latter exists, unaccompanied by overcrowding of persons to the room, to which Simon devotes rather little attention, there is a *prima facie* case for reconditioning provided that the house has a sufficient expectation of life.

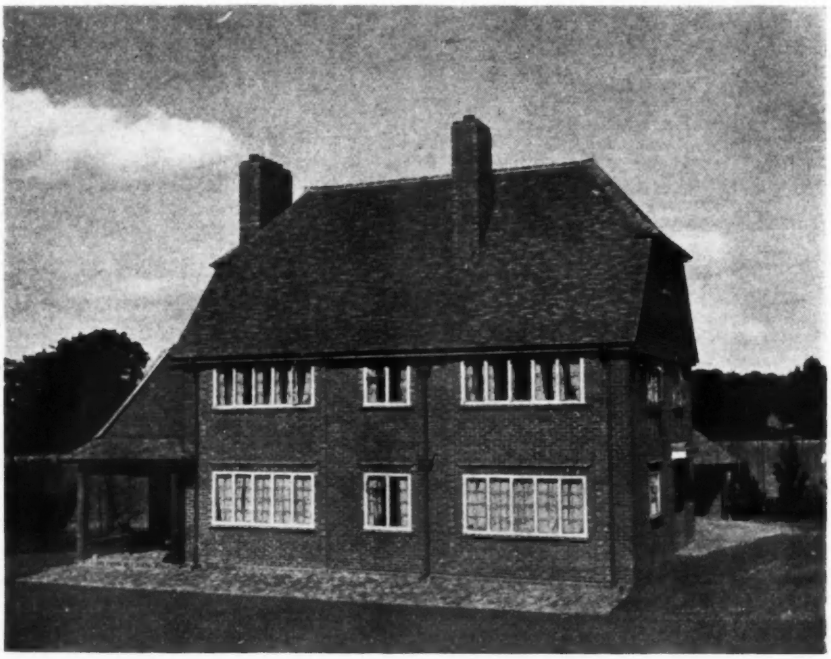
There are really four lines on which a housing policy should proceed, the order in which they are placed is not to be taken as indicative of an order of importance or an order in which action should be taken. The four aspects are :—

1. Abatement of overcrowding of persons per room in houses of a sanitary nature. This involves rehousing some families and reconditioning the houses for the others.
2. The demolition of slums and the rehousing of their inhabitants.
3. The provision of houses to overcome the present shortage and to anticipate future needs, so far as this is not covered by (1).
4. Reconditioning of many of the houses at present inhabited by more than one family and which though not overcrowded or unfit are at present structurally unsuited to the use to which they are put.

For all this work it seems reasonable to suggest that rents should be according to means. Flat subsidies are wasteful of public money in some instances, and not large enough in others.

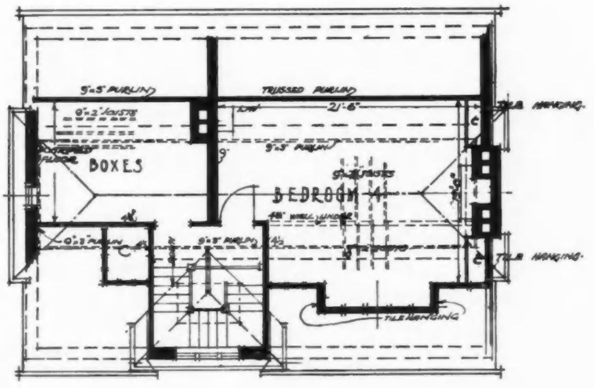
The technicalities involved in a plan along four lines instead of one may perhaps strengthen the case for the formation of a National Housing Board, which is advocated by the author.

HOUSE AT SEAL:

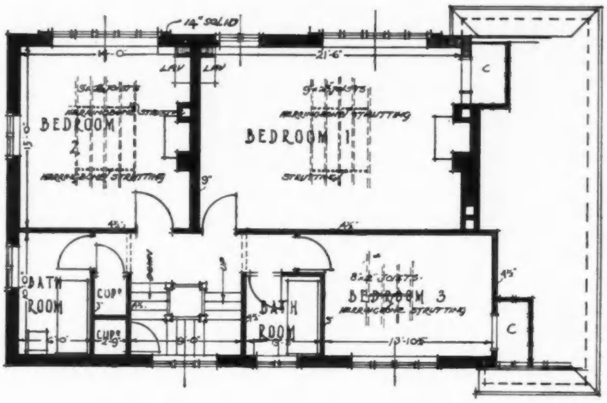


This house at Seal, Kent, was designed to provide three rooms, each 21 ft. by 15 ft. It is faced with local bricks, roofed with multi-coloured tiles, and cost £2,150, including the garage.

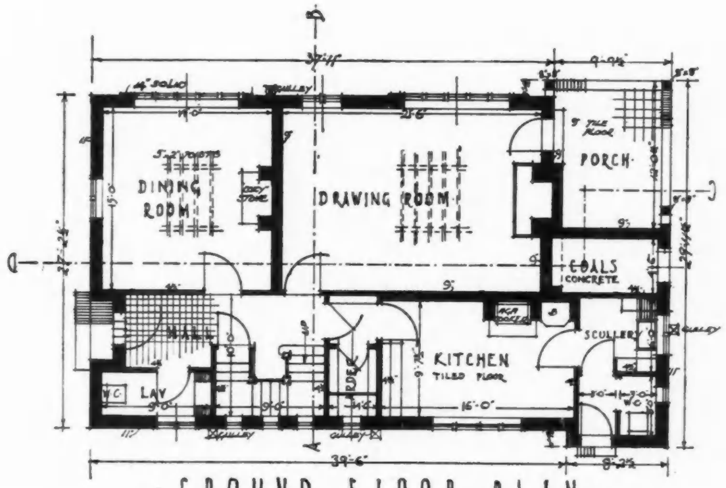
BY W. H. ANSELL



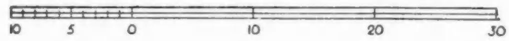
·ATTIC PLAN·



·FIRST FLOOR PLAN·



·GROUND FLOOR PLAN·



IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Slum Clearance

MR. RHYS-DAVIES asked the Minister of Health if he would state the number of local authorities that had submitted schemes for slum clearance and the number that had been approved by his Department.

Mr. Hicks asked what progress had been made in slum clearance.

Mr. Shakespeare, who replied, said that the Minister understood that the questions referred to the later stage of schemes included in resolutions and orders under the Housing Act, 1930, and not to the earlier stage of submitting programmes in response to the Minister's circular of April 6 last. As to the former, up to October 31, 236 local authorities in England and Wales submitted to the Minster resolutions declaring 1,265 areas comprising 32,839 houses to be clearance areas; 878 clearance and compulsory purchase orders affecting 23,012 houses were submitted for confirmation and 519 orders made by 139 local authorities affecting 13,133 houses were confirmed; in addition 1,013 houses were purchased by local authorities for demolition without a compulsory purchase order. At a later stage, the Minister would make a statement showing what a remarkable response to his circular was coming in from local authorities, and how the problem was being tackled.

Sir Francis Fremantle asked the Minister of Health if he would state the number of local housing authorities that had not submitted to him programmes of slum clearance; what steps he proposed to take to secure effective action in such cases; and whether he was satisfied with the progress being made throughout the country to secure clearance of all slum areas within five years.

Sir Hilton Young said that there were 1,717 local housing authorities, and of these 1,341 were County District Councils. He had received 1,176 returns. There were thus 541 outstanding, including 418 from County District Councils. In any case in which a local authority had submitted no programme, and he had *prima facie* evidence that a programme should be submitted, he should, after communications of the usual sort, proceed to secure the holding of a public local inquiry into the position under Sections 35 or 52 of the Act. As to the last part of the question, in general the local authorities' programmes were satisfactory.

In reply to Mr. Stourton, Sir Hilton Young added that he could not give the number of new houses proposed to be provided until programmes had been submitted by all housing authorities, but it was estimated on the basis of programmes already received that 200,000 houses would be provided in five years.

Captain Peter Macdonald asked the Minister of Health if he had been able to make any estimate, as a result of the slum-clearance schemes now received by him, of the approximate annual cost to the State of assisting such schemes.

Sir Hilton Young said that estimates based upon the programmes already received indicated that on the average 44,000 houses a year would be provided by the local authorities under their five-year slum-clearance schemes. This would involve an Exchequer commitment of approximately £550,000 for each year's instalment, rising to £2,750,000 a year on completion of the programme. The annual subsidy was payable for a period of 40 years from completion of the houses.

In reply to a number of members, Sir Hilton Young said he had received proposals from local authorities for giving guarantees under the Act of 1933 in respect of approximately 13,000 houses. He should not, however, be in possession of information as to the number of houses for which guarantees had been given until he received the returns due from local authorities on December 31 next.

Mr. Harcourt Johnstone asked the number of houses it was estimated would be built for the accommodation of previous slum dwellers during the year 1934.

Sir Hilton Young said that estimates based upon the programmes already received indicated that an average of about 41,000 houses per annum would be provided for five years by local authorities under their slum-clearance schemes. It was not possible to state with certainty whether that average rate would be attained in the first year of the scheme.

Major Nathan asked the Minister of Health whether he had received any definite programme of the unhealthy areas to be cleared or improved by the London County Council under the provisions of the Housing Act, 1930, during the next five years, as called for in his Housing Circular, 1931.

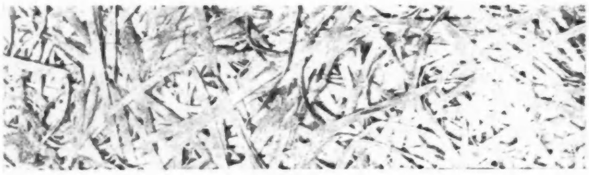
Sir Hilton Young said he had received early in August a comprehensive report from the County Council containing aprogramme for the displacement and rehousing within a period for 10 years of a quarter of a million persons. He was expecting a supplementary and more detailed report shortly. He would remind the hon. Member that it was recognized in circular 1331 that the time needed to remedy the present deficiencies in London would be longer than in other areas.

Mr. Stourton asked the Chancellor of the Exchequer if he would consider raising a national housing development loan of £500,000,000 in order that slums might be abolished, and their population rehoused on a comprehensive scale suitable to the urgency of the need.

Mr. Chamberlain said he had every reason to believe that the existing arrangements for raising capital for slum clearance were fully adequate.

Mr. H. Williams asked the Minister of Health if he could state the total number of houses constructed during the six months ended September 30, 1933, and, for comparison, the corresponding number during the same period of the previous year.

Sir Hilton Young said that the total number of houses completed in England and Wales during the six months ended September 30, 1933, was 113,332. The corresponding number for the six months ended September 30, 1932, was 95,515. The increase in comparison with the earlier period was thus 17,817 or 18·6 per cent. These numbers exclude houses of a rateable value exceeding £78 (£105 in the metropolitan area).



TRADE NOTES

[*BY F. R. S. YORKE, A.R.I.B.A.*]

Heraklith

HERAKLITH is a building slab that has been very much favoured by Continental architects in recent years, and has now a growing popularity in England. It is made from compressed petrified wood-wool (appearing as thin shavings) and a special cementing material, and impregnated with a chemical compound, which accounts for several of its most important qualities. (A photograph of the slab's surface is reproduced at the head of this page.)

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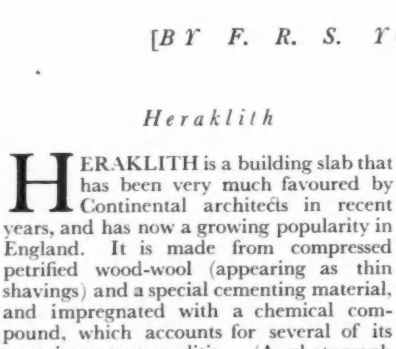
It is made in slabs 79 ins. by 19½ ins. and in 1, 2, 3, 4, 5 and 6 ins. thickness.

●

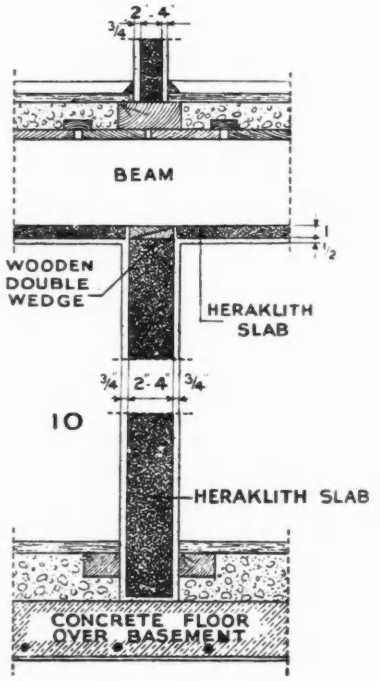
Among the many claims made in its favour are high sound and thermal insulating properties, lightness, and resistance to fire, vermin and rot. It can be sawn, cut, chiselled, drilled, nailed, easily and without risk of splitting. It does not shrink, expand or warp, and it is said to have unlimited life, becoming harder in the course of time. It is further stated that it has a lower heat conducting capacity than any other building material at present known, and the following figures are given as a comparison :—



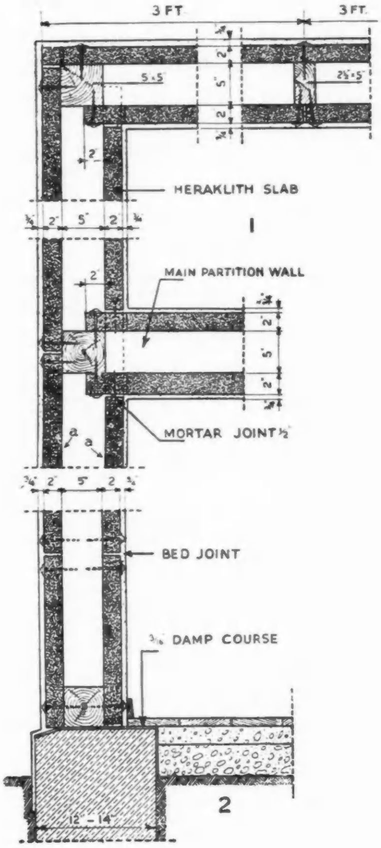
Non-supporting soundproof partitioning formed from compressed wood-wool slabs 2 ins., 3 ins., or 4 ins. thick.

	Heat-conducting Index Figure B.T.U.	Weight per cubic foot lb.
Brick wall (6 months old)	4·5	109
Artificial stone ..	4·5	86
Hollow bricks ..	3·9	83
Brick wall (entirely dry)	2.82	103
Concrete	2.4	72
Slag-concrete ..	1.36	54
Plaster of paris and cork	1.26	43
Slags..	0.84	49
Sawdust in Portland cement ..	0.78	52
Sand and concrete	0.66	39
HERAKLITH ..	0.396	22

It weighs 22 lb. per cu. ft., whilst a cu. ft.



The illustration at the top of this page is reproduced by permission of the N.F.B.A. Fire Prevention Department.



Timber framing on concrete foundations, covered on each side by 2-ins. thick compressed wood-wool slabs.

of brickwork weighs 109 lb., and a cu. ft. of slag-concrete weighs 54 lb. Its standard dimensions, weights and costs are :—

Surface : 79 ins. long by 19½ ins. wide.

Thicknesses :	1 in.	2 ins.	3 ins.	4 ins.	5 ins.	6 ins.
Weight per slab, approx. .. lb.	20	40	60	80	100	120
Price per yard super (to the Trade) ..	3/1½	4/11	7/-	10/2	12/7	14/11

●

The manufacturers issue a folder containing a series of thirteen sheets illustrating methods of Heraklith construction for various purposes : as a covering on each face of timber framework, reinforced concrete construction formed in Heraklith slab casing, as a lining to steel framing, for remedying damp walls, non-supporting partitions built from Heraklith slabs laid with lime mortar gauged with plaster of Paris, ceiling, wall and roof insulation, cold storage construction, etc.

Metric Equivalent Tables

I have received from Kingston's Translations Institute a revised edition of Metric Equivalent Tables—a four-page leaflet, price 1s. 1d. post free. These tables appear to furnish an answer to every question liable to arise concerning metric and imperial weights and measures and thermometer scales ; the equivalent, for instance, in miles of so many kilometres per hour, in acres of an area of so many hectares, in Fahrenheit of a temperature expressed in Centigrade, or again, how many grammes go to an ounce, how many litres to a gallon, and the number of yards to a kilometre.

Surface Treatment of Concrete

Imperial Chemical Industries have recently issued a brochure explaining the use of silicate of soda in the surface treatment of concrete, for the purpose of closing the pores, hardening the surface, and increasing the waterproof qualities of the material.

●

Silicate of soda is a material closely resembling glass, but it is soluble in water. It is commonly supplied in the form of a concentrated solution, sometimes known as "water-glass." On exposure to the atmosphere this solution dries to a hard glassy solid. There are many grades of silicate of soda which differ in the proportion of sodium oxide to silica; but for the treatment of concrete a special grade is available. This is known as P.84 Silicate of Soda and contains less alkali than ordinary "water-glass" and proportionately more of the active hardening ingredient—silica. It is supplied as a concentrated solution and requires to be diluted with water before it is used for the treatment of concrete.

●

It appears as a clear, colourless and odourless liquid. It is non-inflammable, non-corrosive and non-poisonous, and is easy and safe to handle.

●

All concrete, whether it be well made and high in cement content, or badly made and low in cement content, can be improved by treatment with P.84 Silicate of Soda. When this solution is diluted with water and applied to the concrete it is rapidly absorbed by the porous surface, where it combines with the calcium hydroxide and calcium salts that are always present, to form a tough glassy material consisting chiefly of calcium silicate and silica. After two or three applications the surface pores of the concrete will be completely filled to the depth of about one quarter of an inch with this glassy deposit. By this means a hard, non-porous surface is obtained through which water and other liquids cannot easily penetrate. The appearance of the concrete remains unchanged ; no "skin" is formed, and the surface does not become slippery as a result of the treatment.

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The concentrated solution supplied is diluted with four times its own volume of water, and the dilute solution is sprayed on with a watering can, spray or water cart, and spread evenly with a mop.

●

The silicate of soda is rapidly absorbed, and after twenty-four hours the surface of the concrete should be quite dry and ready for another application. Three applications, if carried out in this way, are usually sufficient. In order to gain the maximum effect from this treatment it is important that the surface of the concrete should be clean, free from grease, and as dry as possible. Care should also be taken not to spill the solution on paintwork, clothes, etc., as it rapidly sets to a hard mass which is extremely difficult to remove.

●

The addition of silicate of soda to gauging water gives a concrete that is both quick-setting and non-porous ; but a serious reduction in the strength of the finished product occurs when the silicate is applied in this way, consequently this method of treatment is not recommended. In certain cases, however, where resistance to the action of water and acids is a more important consideration than structural strength, e.g. in pointing between sewage blocks, definite advantages may be obtained by mixing silicate of soda with the gauging water, in the proportion of two parts by weight of Silicate of Soda to 100 parts by weight of cement.

Literature Received

Staybrite	*Thomas Firth and Sons*
Large Cooking Equipment	*The Davis Gas Stove Co.*
The Aga Cooker	*Bell's Heat Appliances*
Household Electric Appliances	*G.E.C.*
Large Scale Kitchens	*British Commercial Gas Association*
Stainless Steel Utensils	*A. Johnson and Co.*

Manufacturers' Items

The name of Messrs. Barker, Young & Co., Ltd., the well-known manufacturers of electrical heating apparatus, has been changed to *Unity Heating, Ltd.*

Unity Heating, Ltd., consolidates the interests of, and succeeds, Barker, Young & Co., Ltd., Young, Osmond and Young Ltd., and the Electro-Gas Development Co., Ltd.

We understand that this change is due to the fact that the Company have found themselves becoming known in the trade under the terms of "Unity Heating," and they believe that the new name will be found easy and convenient to remember.

No change in policy or personnel is entailed in the change of name.

*

Messrs. H. H. Martyn & Co. of Cheltenham announce that they have amalgamated with Messrs. Maple & Co. of London, and will in future undertake such architectural manufacture as has hitherto been carried out by Messrs. Maple & Co.

Messrs. H. H. Martyn & Co. will continue under the same management as before, with Mr. David Longden as Managing Director. The same traditions will be maintained in working for and collaborating with the architectural profession.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

BERMONDSEY. *Flats and Shops.* The B.C. is to erect 63 flats and two shops on the Leroy Street area, at a cost of £33,330.

CITY OF LONDON. *Houses.* The City of London Corporation Estates Committee has approved a scheme for the erection of dwellings in the Tupman Place area, at a cost of approximately £40,000.

CROYDON. *Houses.* Plans passed by the Corporation: Five houses, Ridgemont Avenue, for Mr. P. Richardson; six shops, Mitcham Road, for Mr. J. G. Calcot; extensions, Empire Works, Mitcham Road, for Mr. S. H. Palmer; six houses, Sundial Avenue, for Central Estates, Ltd.; six houses, Firsby Avenue, for Messrs. Bleach and Skipper; 18 houses, Hartley Way, for Mr. S. J. Hunt; four houses, St. Leonards Road, for Mr. C. Lewin; two blocks of flats, St. James Road, for Mr. J. Eldon Fox; four houses, Cheston Avenue, and house, Northampton Road, for Mr. H. Miller; two houses, Coombe Road, for Mr. C. J. Doyle; two houses, Violet Lane, for Mr. E. S. Rawlings; six houses, Lloyd Park Avenue, for Mr. S. H. Paver; five houses, Selhurst New Road, for Mr. J. E. Willcocks.

CROYDON. *Bathing Pool.* The Corporation recommends the construction of a bathing pool at Purley Way playing fields, at an estimated cost of £24,000.

EALING. *Factories and Houses.* Plans passed by the Corporation: Factories and stores, Cambridge Road, for Mr. R. A. C. Churchward; factory, North Circular Road, for County Perfumery Co.; factory extensions, Waxlow Road, for Mr. H. Goslett; factory, Wadsworth Road, for Mr. R. B. J. Selby; club room, Bridge Avenue, for Mr. R. J. Ward; factory, Aintree Road, for Messrs. Percy Bilton, Ltd.; two houses, Beaufort Road, for Messrs. Haymills, Ltd.; 15 houses, Braund Avenue, for Mr. J. W. Bateson; 20 houses, Rydal Crescent, and 27 houses, Coniston Avenue, for Mr. A. E. Murdoch; four houses, Church Road, for Messrs. Grainger Bros., Ltd.; six houses, Rydal Crescent, for Messrs. R. Lancaster and Sons; 105 houses, Devon Close, for Messrs. Swannell and Sly, on behalf of Hillingdon Estates Co.; eight houses, Hill Rise, for Unity Building Co.; 96 houses, Western Avenue, etc., for Mr. S. H. West, on behalf of London & Provincial Building Co., Ltd.; two houses, Whitton Avenue, for Messrs. Wood and Waller; four shops and flats, Ruislip Broadway, for Messrs. Davies and Knight; 24 flats, Wordsworth Parade, for Home Counties Builders, Ltd.; two shops and flats, Ruislip Broadway, for Mr. E. R. Taylor; 42 houses, Bennets Avenue, etc., for Mr. A. V. Stubbs; two houses, Lower Boston Road, for Messrs. Bostock and Hollins; factory, North Circular Road, for Gilford Motors, Ltd.; factory, Bilton Road, for Mr. W. Clark; four houses, Mayfield Gardens, for Mr. J. W. Allen; two bungalows, Eastmead Avenue, for Mr. G. Gould; two houses, Greenford Gardens, for Mr. W. Haunton; 12 houses, Rydal Crescent, for Mr. F. Roberts; factory, Aintree Road, for Messrs. Gompertz and Meirrath, Ltd.

ELTHAM. *School.* The L.C.C. has approved plans for the erection of an elementary school at Briset Road, Eltham, at a cost of £27,688.

LEWISHAM. *Houses and Shops.* Plans passed by the B.C.: 25 houses, Perry Rise estate, and 117 houses, Thornsbeach Road, for Mr. L. A. Culliford; two shops, Grove Park station, for Messrs. Lister & Co., Ltd.; estate development, Dartmouth Road, Forest Hill, for Messrs. Brett and Sons.

MIDDLESEX. *Halls and Public Houses.* Middlesex C.C. Licensing Committee has provisionally approved plans in respect of the following premises: Merryhills Hotel, Enfield Road, Southgate (new building); War Memorial Hall, Harrow Weald (alterations and extensions); Parish Hall, South Mimms (adaptation of unlicensed building); proposed Y.M.C.A., Gordon Road, Wealdstone (new building); Suffolks school, Brick Lane, Enfield (new building); Empire Cinema, Willesden (alterations); Golders Green Hippodrome (alterations); proposed St. Paul's Parish Hall, St. Paul's Road, Brentford (new building); "White Horse" public-house, Church Road, Willesden (alterations); proposed church hall, Hayes (new building); Stanwell Women's Institute (new building); Queen's Hall Cinema, Brentford (alterations); proposed church hall, Southgate (new building); Regal Cinema, Edmonton (additions); "Fountain" beerhouse, Tottenham (alterations).

PINNER. *Shops, Flats and Roads.* Mr. W. A. Ross is to erect 13 shops and flats at Pinner Road, Pinner, Middlesex; and Rotherham Estates, Ltd., are to construct seven new roads on their estate off Cannons Lane, Pinner.

WATFORD. *Houses, Flats and Shops.* Plans passed by the Corporation: 48 houses, North Western Avenue, for Messrs. Kempster and Williams; five shops and flats, High Street, for Mr. A. B. Cox; lay-out, Garston House estate, for Messrs. Forbes and Tate; two houses, Leggatt's Way, for Watford Ideal Homes, Ltd.; 26 houses, Sheepcot Lane, for Hillingdon Estate Co., Ltd.; four houses, Westfield Avenue, Bradshaw estate, for Mr. J. F. Sleight; 12 houses, Kingswood estate, for Mr. J. C. Nice; four houses, Berceau Walk, for Mr. E. W. Puddifoot; four houses, Pinner Road, for Mr. E. V. Higgs.

SOUTHERN COUNTIES

BEXHILL. *Houses.* Plans passed by the Corporation: Three houses, Plemont Gardens, for Mr. J. E. Maynard; 10 houses, St. James' Avenue, for Mr. J. H. Lye; three houses, Southlands Avenue, for Messrs. Jeffery and Bowcock; three houses, Gunters Lane, for Mr. R. W. Moore; ten houses, Peartree Lane, for Mr. E. Bunce.

BRIGHTON. *Houses.* The Corporation's slum clearance programme makes provision for the erection of 486 houses in the next five years.

CHELMSFORD. *Schools.* The Education Committee suggests the provision of a mixed senior school for 360 children, a mixed junior school for 440, and an infants' department for 180 children.

EXETER. *Waterworks.* The Corporation recommends the extensions of the waterworks, at a cost of £57,522.

SOUTH-WESTERN COUNTIES

CHELTENHAM. *Swimming Pool.* The Corporation is to proceed with the preparation of a scheme for the provision of an open-air swimming pool on allotments adjoining Sandford Park, at an estimated cost of £13,000.

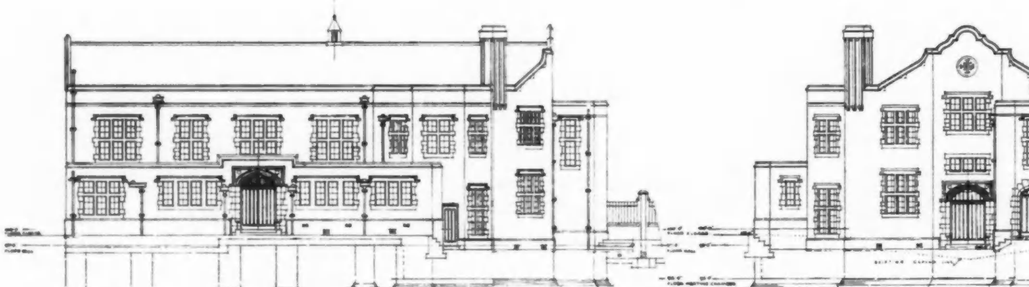
MIDLAND COUNTIES

CHESTERFIELD. *Houses.* The Corporation has arranged for the provision of 134 houses under clearance schemes.

CORBY. *School.* The Northants Education Committee is to acquire compulsorily a site at Corby for the erection of a school for 600 for which plans have already been approved.

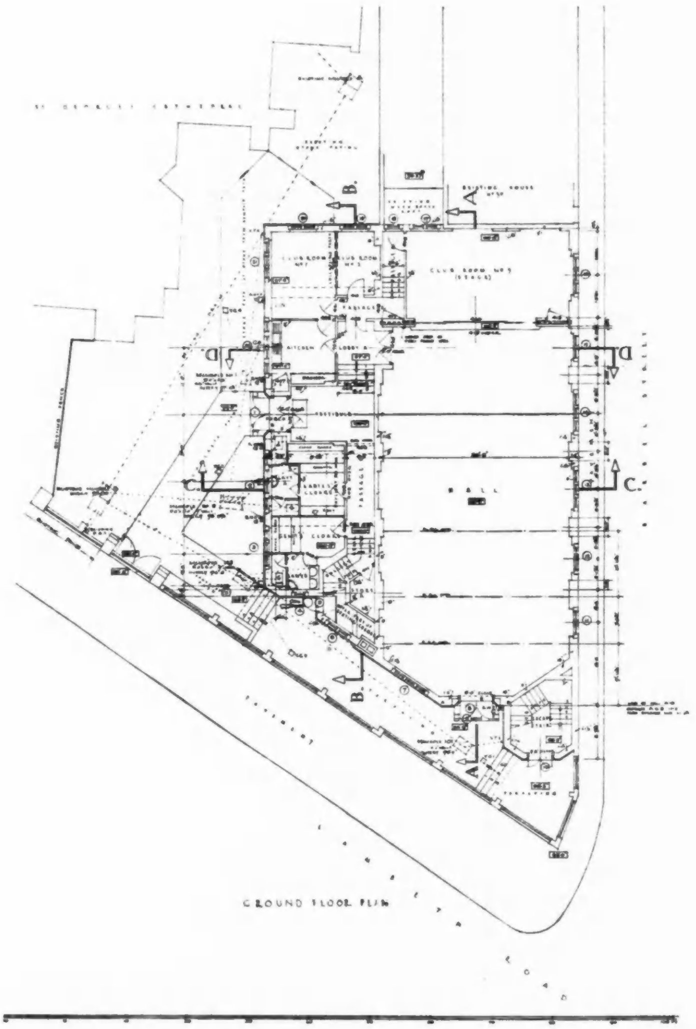
DUDLEY. *Houses and Shops.* Plans passed by the Corporation: Four houses, Buffery Road, for Messrs. Poole Bros.; additions to shops, New Street, for Mr. A. E. Williams; two houses, Dudley Wood Road, for Mr. A. Auden; two houses, Dudley Wood Road, Netherton, for Mr. W. Easthope; six houses, New Road, Netherton, for Messrs. T. Smith and Son; house and shop, Buffery Road, for Messrs. Lloyd Bros.; eight houses, Bowling Green Road, for Messrs. Roberts Bros.; house and shop, Cole Street, Darby End, for Mr. Joseph Read.

STOKE-ON-TRENT. *Houses.* The Corporation is to obtain tenders for the erection of 88 houses on the Carmountside estate; and is to erect



PROPOSED HALL, ST. GEORGE'S R. C. CATHEDRAL, SOUTHWARK. Architects: FREDERICK A. WALTERS AND SON

This hall, of which the plan is given on the next page, is to be erected at the junction of Lambeth Road and Barbel Street, Southwark. It is to serve as an assembly hall for the elementary school nearby and for social purposes for the parish, and has been designed to be in keeping with the Bishop's house adjoining the Cathedral, which is of a domestic perpendicular character.



Plan of the proposed hall, St. George's Cathedral, Southwark, designed by Frederick A. Walters and Son, of which the elevations are illustrated on the previous page. The total accommodation will be for about 400, including 100 in the gallery. It is to be faced externally with stock bricks with artificial stone on terra cotta dressings. Metal windows will be used.

120 houses for displaced slum tenants on the Shelton estate, at a cost of £37,800.

WOLVERHAMPTON. *Houses.* Plans passed by the Corporation: Seven houses, Penn House Avenue, for Messrs. E. Leach & Co.; four houses, Manor Road, Oxley, for Messrs. Pidgeon Bros.; four houses, Oxley Moors Road, for Bushbury Estate and Building Co.; 88 houses, New Penn Estate, for Mr. A. M. Griffiths; workshop, etc., Marston Road, for The Villiers Engineering Co.; licensed premises, Bushbury Lane, for Messrs. W. Butler & Co., Ltd.; stores, Park Lane, for Messrs. Henry Meadows, Ltd.; two shops, North Steet, for Mr. T. G. Bayley; six houses, Trysull Road, for Messrs. Goring Bros.; five houses, Chetwynd Road, for Messrs. Taylor Bros.

NORTHERN COUNTIES

BIRKENHEAD. *Houses and Flats.* The Corporation is purchasing sites in the northern area at a cost of £20,000 for housing purposes, and is to prepare plans for the erection of 15 flats in Chamberlain Street.

BLYTH. *Bathing Pool.* The Corporation has approved a scheme for the construction of a bathing pool, with dressing rooms, conveniences and tea rooms, and has instructed the borough engineer to prepare plans, including hot salt water slipper baths, at a cost not exceeding £35,000.

BOLTON. *Houses, Shops, etc.* Plans passed by the Corporation: Two shops and houses, Elgin Street, for Mr. Wm. Gornall; 10 houses, Wheatfield estate, for Mr. Wm. Andrew; three shops and houses, Chorley Old Road, for Messrs. Price and Groves; shop, New Lane, for Bolton Co-operative Society, Ltd.; laboratory, Fairclough Street, for Messrs. J. Dickinson and Son, Ltd.; works extensions, Windley Street, for Messrs. R. E. Roberts and Son, Ltd.; two houses, Barrow Bridge Road, for Messrs. George and Beddows; canteen, New Mill, Holland Street, for Messrs. J. Ashworth, Ltd.

BOLTON. *Houses.* Plans passed by the Corporation: One shop and five houses, Adrian Road, for Mr. J. Moss; six houses, Melbourne Road, for Mr. J. R. Bushell; 12 houses, off Moss Lane, for Mr. A. S. Woods; 12 houses, Lever Edge Lane, for Mr. E. J. Turner; 12 houses, Forester Street, for Mr. R. J. Tyson; 360 houses, Top Brow estate, for Corporation.

BOOTLE. *Houses.* Plans passed by the Corporation: 70 houses, Burnie Avenue, for Messrs. J. W. Jones and Sons, Ltd.; estate development, vicinity of Aintree Road, for Messrs. Barnes and Kelly.

BRADFORD. *Slum Clearance.* The Corporation has prepared a slum clearance scheme involving the provision of 2,000 new houses.

JARROW. *Houses.* The Corporation Housing Committee recommends the erection of 168 houses on land near York Avenue, to rehouse persons displaced from the North Ward area.

MANCHESTER. *Houses.* The Corporation is to erect 250 houses at Brownley Green at an estimated cost of £85,875.

THE BUILDINGS ILLUSTRATED

Sub-Contractors' List

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue.

Boots Cash Chemists' shop, Jersey (pages 638-639). General contractors, Ernest Farley. Sub-contractors: The Trent Concrete Co., reconstructed stone; Banister, Walton & Co., steelwork; Crittalls Manufacturing Co., steel windows; Boots Shopfitting Department, shop front and fittings; Waygood-Otis, Ltd., goods lift; The Val de Travers Asphalte Paving Co., asphalt; Langley London, Ltd., roof tiling; Docking & Co., Ltd., heating; A. Scull and Son, ventilating; The Axis Supplies, Ltd., electric wiring; Franco-British Electrical Co., Ltd, neon signs; Marc-Henri and Laverdet, decorations; Fenning & Co, Ltd., travertine entrance; Korkoid and Ruboleum Floor Co., flooring; A. de Gruchy & Co., carpets and curtains.

House at Seal (pages 642-643). Sub-contractors: Drytone, Ltd., one-panel doors; A. H. Herbert & Co., local bricks; Mabey and Johnson. "Dreadnought" tiles; James Gibbons, Ltd., casements and furniture; Bell's Heat Appliances, Ltd., "Aga" cooker.

The Show Boat, Maidenhead (pages 633-636). General contractors, the Empire Building Co., who were also responsible for the reinforced concrete work, other than the swimming pool. Sub-contractors: James Couper & Co., steelwork; Badnell Bros., sand and cartage; Wraysbury Sand and Gravel Co., Ltd., aggregates; Summerleaze Gravel Co., tarmacadam; Thos. Lawrence and Sons, bricks; Cement Marketing Co., Ltd., cement; Trussed Concrete Steel Co., Ltd., reinforced concrete pool; D. Anderson and Son, Ltd., asphalt roofing; Chas. Harrison, metal windows, sanitary fittings, ironmongery and kitchen equipment; Waltham Precast Concrete Co., precast slabs; Fairways, Ltd., "Hydrokeen" plastering and glazed iling; St. Helens Cable & Rubber Co., Ltd., rubber floors; Monarch Flooring Co., oak dance floor; Cox Bros. & Co., Maidenhead, Ltd., timber; R. Barjent, joinery; Hitchins Fush Woodwork, Ltd., laminated doors; Maple & Co., Ltd., fibrous plastering and decorations, furnishings, etc., neon lighting; Widney Manufacturing Co., Ltd., art metalwork; Ellis (Kensington), Ltd., heating and ventilating; Thame and Farr, plumbing; Pickerings, Ltd., lift; Bell Bros. (Manchester), 1927, Ltd., filtration plant; Girlings Ferro Concrete Co., Ltd., precast cascade; Troughton and Young, Ltd., electrical work; Lewis Berger and Sons, Ltd., Matroil distempers; Heelas and Sons, linen; Gladwin, Ltd., cutlery; Moss Kauffman, glassware; Dunn Bennett, crockery; Jantzen Knitting Mills, Ltd., costumes; Wm. Yandell, floral decorations; Melody Shop, wireless installation.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	ABERDARE	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	BANBURY	S. Counties	1 3	11½
B_1	Bangor	N.W. Counties	1 3	11½
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11½
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B_3	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11½
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5½	1 1¼
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A_1	Buxton	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A_3	Cumberland	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
A_2	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11½
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11½
A	HALIFAX	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S Counties	1 2	10½
A	JARROW	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	LANCASTER	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11½
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH	N.W. Counties	1 4½	1 0½
A	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	PAISLEY	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS	E Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	TAMWORTH	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1¼
A	Tyne District	N. E. Coast	1 5½	1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11½
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A_3	Worksop	Yorkshire	4	1 0
A_1	Wrexham	N.W. Counties	5	1 0¾
A_3	Wycombe	S. Counties	4	1 0
B_1	YARMOUTH	E. Counties	1 3	11½
B_1	Yeovil	S.W. Counties	1 3	11½
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
White Portland Cement	,,	8	15	0
Thames Ballast	per Y.C.		6	3
¾" Crushed Ballast	,,		6	9
Building Sand	,,		7	3
Washed Sand	,,		8	3
2" Broken Brick	,,		8	0
¾" ,, ,,	,,		10	3
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	8	17	6
,, Wirecuts	,,	7	17	6
,, Brindles	,,	7	0	0
,, Bullnose	,,	9	0	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	7	10	0
Luton Facings	,,	7	10	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	0	0
Headers	,,	20	10	0
Bullnose	,,	27	10	0
Double Stretchers	,,	29	10	0
Double Headers	,,	26	10	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	4½
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	28	17	6
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

			s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		18	6
,, ⅞"	,,	1	1	6
,, 1"	,,	1	2	0
,, 1¼"	,,	1	5	0
,, 1½"	,,	1	10	0
Deal matchings ½"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1½"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	,,	8	6
,, ,, ⅜"	,,	8	3
,, ,, ½"	,,	8	0
,, ,, ⅝"	,,	7	6
,, ,, ¾"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		8		10
Shoes	each	2	0	3	0
Anti-splash shoes	,,	4	6	8	0
Boots	,,	3	0	4	0
Bends	,,	2	7	3	9
,, with access door	,,	—		6	3
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	3	9	6	0
Plinth bends, 4½" to 6"	,,	3	9	5	3
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		6
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	0	6
,, drawn pipes	,,		17	6
,, soil pipe	,,	1	0	6
,, scrap	,,		11	0
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			8½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3"		4"		6"	
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2½
,, ,, 26 oz. ,, ,, ,, ,,	,,					3½
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
⅛" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	2	6	0
,, ordinary	,,	2	0	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
,, to reduce levels n/e 5' 0" deep and cart away	Y.C.		8	6
,, to form basement n/e 5' 0" deep and cart away	,,		9	0
,, ,, 10' 0" deep and cart away	,,		9	6
,, ,, 15' 0" deep and cart away	,,		10	0
If in stiff clay add	,,		2	6
If in underpinning ,,	,,		4	0
Planking and strutting to sides of excavation	F.S.		1	0
,, ,, to pier holes	,,			5
,, ,, to trenches	,,			5
,, ,, extra, only if left in	,,			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	,,	1	6	0
,, ,, (4-2-1)	,,	1	12	6
,, ,, underpinning	,,	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4"		6"	
		s.	d.	s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra only for bends	Each	2	8	3	9
,, junctions		3	9	4	6
Gullies and grating	,,	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	27	10	0
,, ,, in cement	,,	28	15	0
,, Stocks in cement	,,	35	0	0
,, Blues in cement	,,	52	0	0
Extra only for circular on plan	,,	2	0	0
,, backing to masonry	,,	1	10	0
,, raising on old walls	,,	2	0	0
,, underpinning	,,	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	,,			8½
,, ,, ,, red brick facings and pointing	,,			11
,, ,, ,, blue brick facings and pointing	,,		1	4
,, ,, ,, glazed brick facings and pointing	,,		3	6
Tuck pointing	,,			7
Weather pointing in cement	,,			3½
Slate dampcourse	,,			10
Vertical dampcourse	,,		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	,,	6	9
¾" paving or flat	,,	4	0
1" paving or flat	,,	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	,,		2
Rounded angle	,,		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	,,		13	6
Artificial stone and do.	,,		13	0
York stone templates, fixed complete	,,		10	6
,, thresholds	,,		13	6
,, sills	,,	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	,,	3	7	0
Do., 24" × 12"	,,	3	17	0
Westmorland slating, laid with diminished courses	,,	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	,,	3	0	0
Do., all as last, but of machine-made tiles.	,,	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	,,	4	6	6
,, ,, ,, ,, ,, ,, (green)	,,	4	15	0

CARPENTER AND JOINER

		£	s.	d
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
,, to stanchions	,,			8
,, to staircases	,,		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	,,		4	6
,, ,, roofs	,,		6	6
,, ,, trusses	,,		7	6
,, ,, partitions	,,		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" ,, ,, ,, ,,	,,	1	17	6
1¼" ,, ,, ,, ,,	,,	2	3	0
¾" × 2" fir battening for Countess slating	,,		9	6
Do. for 4" gauge tiling	,,		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
,, ,, ,, 2 ,,	,,		2	9
,, ,, ,, 3 ,,	,,		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1½" ,, ,, ,, ,, ,,	,,		1	6
2" deal wrought rounded roll	F.R.			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼" do.	,,	2	10	0
1½" do.	,,	2	17	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1½" do.	,,		1	9

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	9½
2" ,, ,, ,,	,,	1	11½
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" beads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	3	7
2" ,, ,, ,,	,,	3	10
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" ,, ,, ,,	,,	2	8
1½" ,, but moulded both sides	,,	2	4
2" ,, ,, ,,	,,	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	0
4½" × 3½" ,, ,,	,,	1	4
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	2	6
1½" deal moulded wall strings	,,	2	1
1½" ,, outer strings	,,	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" ,, ,,	,,	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	,,	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	,,		19	6
Do. stanchions with riveted caps and bases and do.	,,		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	,,		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	0
Do. in flashings		1	17	6
Do. in covering to turrets, etc.	,,	2	3	6
Do. in soakers	,,	1	9	6
Labour to welted edge	F.R.			3½
Open copper nailing	,,			3½
Close ,, ,,	,,			4½

		½"		¾"		1"		1½"		2"		4"	
		s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Lead service pipe and fixing with pipe hooks	F.R.	1	0	1	2	1	5	2	1	3	0	—	
Do. soil pipe and fixing with cast lead tacks		—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	3
Do. to stop ends	,,		6½		8		9		11	1		—	
Boiler screws and unions	,,	3	3	3	9	5	0	8	0	—		—	
Lead traps	,,	—		—		—		6	3	8	9	—	
Screw down bib valves	,,	6	9	9	6	11	0	—		—		—	
Do. stop cocks	,,	9	0	11	0	14	6	20	6	47	0	—	

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	,,	1	6
Do. outlets	,,	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	,,	5	6

PLASTERER AND TILING

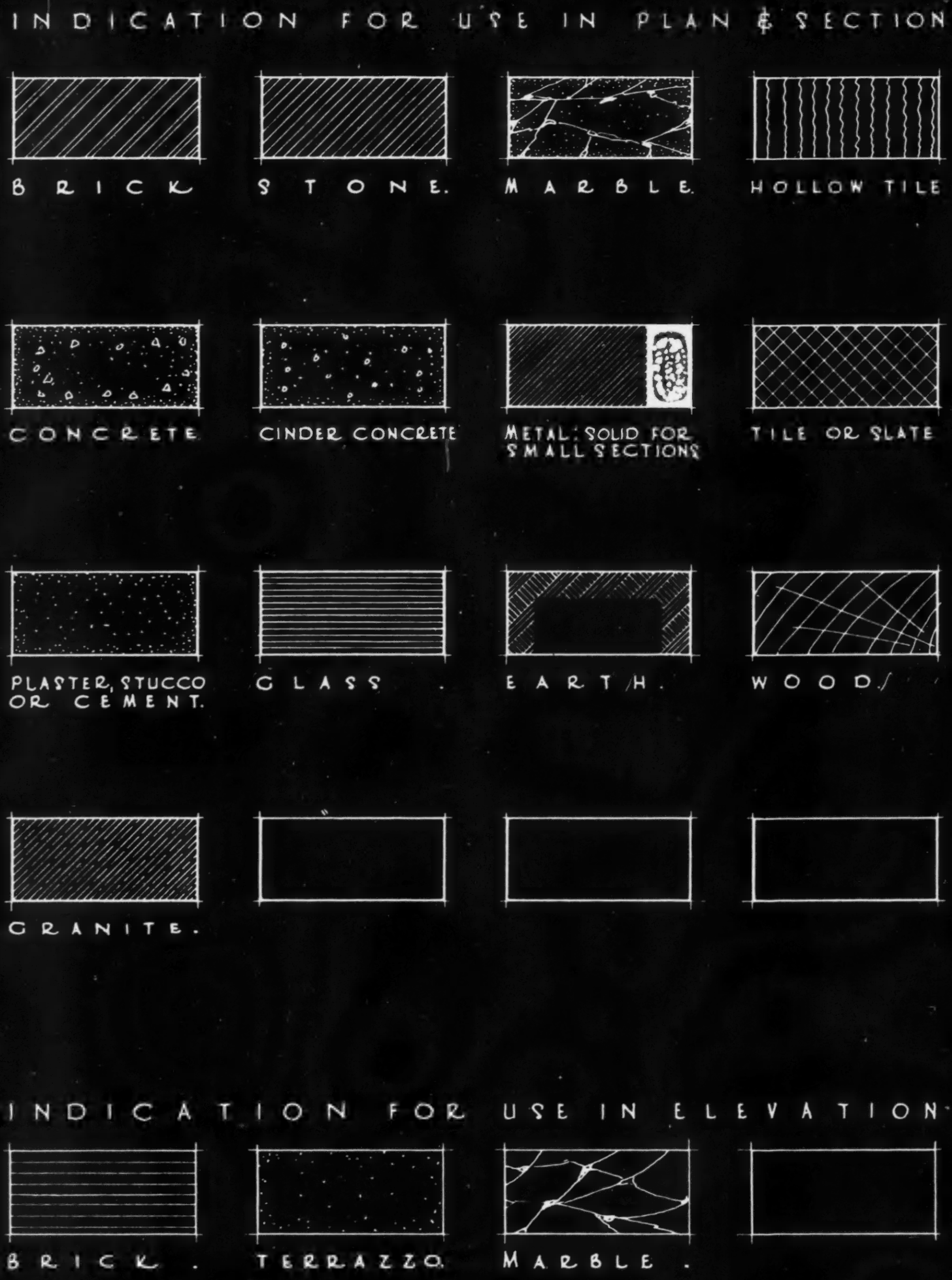
			s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	,,		3	6
Lathing with sawn laths to ceilings	,,		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	,,		1	8
Do. vertical	,,		2	1
Rough render on walls	,,		1	3
Render, float and set in lime and hair	,,		1	11
Render and set in Sirapite	,,		2	1
Render, backing in cement and sand, and set in Keene's cement	,,		2	10
Extra, only if on lathing	,,			4
Keene's cement, angle and arris	F.R.			6
Arris	,,			2
Rounded angle, small	,,			3
Plain cornices in plaster, including dubbing out, per 1" girth	,,			1½
1" granolithic pavings	Y.S.		3	6
1½" ,,	,,		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	,,		17	6
9" × 3" ,, ,, ,, ,,	,,	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7¼
26 oz. do. and do.	,,		8½
Arctic glass and glazing with putty	,,	1	1
Cathedral glass and do.	,,	1	2
Glazing only, British polished plate	,,		7
Extra, only if in beads	,,		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	,,		9
Do. with washable distemper	,,	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3	3
Do. on woodwork	,,	3	0
Do. on steelwork	,,	3	0
Do. and brush grain and twice varnish	,,	5	6
Stain and twice varnish woodwork	,,	1	11
Stain and wax-polish woodwork	,,	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper from	,,	2	9


INDICATION FOR USE IN PLAN & SECTION
BRICK
STONE.
MARBLE.
HOLLOW TILE
CONCRETE
CINDER CONCRETE
METAL: SOLID FOR SMALL SECTIONS
TILE OR SLATE
PLASTER, STUCCO OR CEMENT.
GLASS.
EARTH.
WOOD.
GRANITE.
INDICATION FOR USE IN ELEVATION
BRICK.
TERRAZZO.
MARBLE.

STANDARD INDICATION OF MATERIALS

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEETS

• 53 •

STANDARD INDICATIONS OF MATERIALS

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THE Information Sheet overleaf gives standard drawing office conventions for indicating materials; and the other Sheet presented with this issue is devoted to water data, supply and tank sizes.

The following is a full list of the subjects previously issued:—

1. Jan. 18—Plumbing Fixtures (urinals).
2. Jan. 25—Restaurant Seating.
3. Feb. 1—School Seating.
4. Feb. 8—Theatre Seating.
5. Feb. 15—Cistern Plumbing.
6. Feb. 22—Electrical Symbols.
7. Mar. 1—Motor Car Data.
8. Mar. 8—Billiard Table Data.
9. Mar. 15—Roof Pitches and Drainage.
10. Mar. 22—Lift Sizes, etc.
11. Mar. 29—Sanitary Accommodation.
12. Apr. 5—Lavatory Units: 1.
13. Apr. 12—Lavatory Units: 2.
14. Apr. 19—Plumbing to Basins, Baths, etc.
15. Apr. 26—Pipe Chases, etc.
16. May 3—Drains and Manholes.
17. May 10—Stairway Diagrams.
18. May 17—Risers for Stairs.
19. May 24—Stair Risers and Flights.
20. June 1—Public Exit Stairs.
21. June 8—General Buildings Stairs.
22. June 15—Concrete Stairs: 1.
23. June 29—Concrete Stairs: 2.
24. July 6—Pressed Steel Stairs: 1.
25. July 13—Floor Loads, etc.
26. July 20—Pressed Steel Stairs: 2
27. July 27—Office Furniture.
28. Aug. 3—Furniture and Fittings.
29. Aug. 10—Lay-out of Wardrobes: 1.
30. Aug. 17—Lay-out of Wardrobes: 2.
31. Aug. 24—Common Sizes Miscellaneous.
32. Aug. 24—Electric Lighting: I.
33. Aug. 31—Electric Lighting: II.
34. Aug. 31—Electric Lighting: III.
35. Sept. 7—Electric Lighting: IV.
36. Sept. 7—Vacuum Cleaning Systems.
37. Sept. 14—Steelwork: I.
38. Sept. 14—Steelwork: II.
39. Sept. 21—Steelwork: III.
40. Sept. 21—L.C.C. Waivers: I.
41. Sept. 28—L.C.C. Waivers: II.
42. Sept. 28—L.C.C. Waivers: III.
43. Oct. 5—L.C.C. Waivers: IV.
44. Oct. 5—Phorpres Cellular Flettons.
45. Oct. 12—Lay-out of Hockey Field.
46. Oct. 12—Lay-out of Tennis Court.
47. Oct. 19—Lay-out of Rugby Field.
48. Oct. 19—Lay-out of Association Field.
49. Nov. 2—Lay-out of Badminton Courts: 1.
50. Nov. 2—Lay-out of Badminton Courts: 2.
51. Nov. 9—Kitchens.
52. Nov. 9—Domestic Refrigerators.

WATER MEASURES & GENERAL DATA

1 foot static head . . . . = ·433 lbs per sq. inch.
to convert lbs per □" of water into feet head multiply by 2·31.
1. Board of Trade (English) gallon . . . = 277·463 cubic inches *
. " " " " " . . . . . . = ·1606 cubic foot
. " " " " " . . . . . . = 10 lbs at 62° F.
. " " " " " . . . . . . = 4·5468 litres
. " " " " " . . . . . . = 1·2 U.S gallons
1 ton of water . . . . = 224 English gallons
1 cubic ft of water . . . . = 6·22786 English gals.
. " " " " . . . . = 7·476 U.S. gallons.
. " " " " . . . . = 7·901 New York galls.
. " " " " . . . . = 62·28 q at 62° F.

1 cubic inch of water . . . . = ·01638 litre, ·03607 lbs.
. " " " " . . . . . . = ·003604 English gallon
1 cubic metre . . . . = 1000 litres
. " " . . . . = 219·95 English gallons
. " " . . . . = 35·317 cubic feet
1 litre . . . . = ·03532 cubic foot
. " . . . . = 61·03 cubic inches
. " . . . . = ·21995 gallon
1" of Mercury (Sp. Gr. 13·56) = ·488 lbs per sq. inch
. " " " " " = 13·56 inches of water

*. Under the Weights & Measures Act 1878 1 gal. = 277·279 cub. ins.
. Legal equivalent 1 litre = ·220097 gallons.

AVERAGE CONSUMPTION OF WATER PER HEAD PER DAY IN VARIOUS TYPES OF BUILDING.

Type of building	Gallons per head
Ordinary dwellings	25.
Flats and tenements	30.
Hotels	30.
Office buildings	15.
Schools	10.
Hospitals	35.
Barracks	16.
Cottages	10.

SIZES OF SUPPLY PIPES TO VARIOUS FITTINGS.

Type of fitting	Low pressure up to 20 lbs/sq.in.	High pressure above 20 lbs/sq.in.
Bath	3/4"	1/2" - 5/8"
Basin	1/2"	1/2"
W.C. cistern	5/8" - 3/4"	1/2" - 5/8"
W.C. flush valve	1 1/4" - 1 1/2"	1 1/4" - 1 1/2"
Slop Sink Cistern	5/8" - 3/4"	1/2" - 5/8"
Kitchen sink	5/8" - 3/4"	1/2" - 5/8"
Pantry Sink	1/2"	1/2"
Urinal cistern	5/8" - 3/4"	1/2" - 5/8"

SIZES OF STORAGE TANKS:

Where water supply is constant capacity of tanks should equal one days supply.
Where water supply is intermittent capacity of tanks should equal 2-3 days supply.

WROUGHT IRON OR STEEL PLATE TANKS:

Ministry of Health require
16 I.S.W. gauge plates for tanks up to 40 gallon capacity
14 I.S.W. gauge plates for tanks from 40-100 gallons capacity
12 I.S.W. gauge plates for tanks from 100-200 gallons capacity
1/8" plate for tanks from 200-500 gallon capacity

COMMON SIZES OF WROUGHT IRON RIVETTED TANKS (Nominal capacities).

Gallons	Length	Width	Depth	Length	Width	Depth
20	2'0"	1'4"	1'3"	1'8"	1'3"	1'8"
25	2'0"	1'5"	1'5"	2'0"	1'8"	1'3"
30	2'0"	1'6"	1'7"	1'10"	1'10"	1'6"
40	2'3"	1'8"	1'8"	2'0"	2'0"	1'7"
50	2'5"	1'10"	1'10"	2'0"	2'0"	2'0"
50	2'7"	1'7"	2'0"	.	.	.
60	2'6"	1'11"	2'0"	3'0"	2'0"	1'8"
70	2'8"	2'2"	2'0"	3'0"	2'0"	1'11"
80	3'0"	2'2"	2'0"			
100	3'2"	2'3"	2'3"	3'0"	2'6"	2'2"
100	.	.	.	4'0"	2'0"	2'0"

Gallons	Length	Width	Depth	Length	Width	Depth
125	3'2"	2'6"	2'7"	.	.	.
150	3'7"	2'10"	2'5"	.	.	.
200	3'10"	2'11"	2'11"	4'0"	3'0"	2'8"
250	4'2"	3'3"	3'0"	5'0"	3'0"	2'8"
300	4'6"	3'7"	3'0"	6'0"	3'0"	2'8"
400	6'0"	3'6"	3'2"	7'0"	3'6"	2'8"
400	4'0"	4'0"	4'0"	.	.	.
500	6'0"	4'0"	3'4"	8'0"	3'9"	2'8"
600	6'0"	5'0"	3'4"	8'0"	4'0"	3'0"
700	6'0"	5'0"	3'9"	8'0"	4'0"	3'6"
800	8'0"	4'0"	4'0"	6'0"	5'4"	4'0"
1000	8'0"	5'0"	4'0"	6'8"	6'0"	4'0"

CAST IRON SECTIONAL TANKS:

Built up of flanged cast iron plates bolted together (flanges on either inside or outside as required)
Common sizes of plates : 2'6" × 2'6"   1'6" × 1'6"   2'6" × 2'0"   2'0" × 1'6"   1'6" × 1'0".
2'0" × 2'0"   1'0" × 1'0"   2'6" × 1'6"   2'0" × 1'0"
rounded corner plates { 1'0" × 1'0" × 2'6"   1'0" × 1'0" × 1'6"
1'0" × 1'0" × 2'0"   1'0" × 1'0" × 1'0"

TABLE OF EQUATIONS OF PIPES

Figures below the diagonal refer to pipes of actual diameter given.

	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	7"	8"	9"	10"	12"	14"	16"
1/2"		2·27	4.88	8·49	15·8	31·7	52·9	96·9	205	377	620	918	1292	1767	2488	3786	5927	8535
3/4"	2·60	·	2·05	3·43	6·97	14·0	23·3	42·5	90·4	166	273	405	569	779	1096	1668	2615	3761
1"	7·55	2·90	·	1·62	3·45	6·82	11·4	20·9	44·1	81·1	133	198	278	380	536	815	1263	1837
1 1/4"	·	·	·		1·69	2·67	5·94	11·6	23·7	47·4	78·5	·	·	·	·	·	·	
1 1/2"	24·2	9·30	3·20			2·0	3·34	6·13	13·0	23·8	39·2	58·1	81·7	112	157	239	375	539
2"	54·8	21·0	7·25		2·26	·	1·67	3·06	6·47	11·9	19·6	29·0	40·8	55·8	78·5	119	187	269
2 1/2"	102	39·4	13·6		4·23	1·87	·	1·83	3·87	7·12	11·7	17·4	24·4	33·4	47·0	71·5	112	161
3"	170	65·4	22·6		7·03	3·11	1·66	·	2·12	3·89	6·39	9·48	13·3	20·9	23·7	39·1	61·1	88·0
4"	376	144	49·8		15·5	6·87	3·67	2·21	·	1·84	3·02	4·48	6·30	8·61	12·1	18·5	28·9	41·6
5"	686	263	90·9		28·3	12·5	6·70	4·03	1·83	·	1·65	2·44	3·43	4·69	6·60	10·0	15·7	22·6
6"	1116	429	148		46·0	20·4	10·9	6·56	2·97	1·63	·	1·48	2·09	2·85	4·02	6·11	9·56	13·8
7"	1707	650	226		70·5	31·2	16·6	10·0	4·54	2·49	1·51	·	1·41	1·93	2·71	4·12	6·45	9·31
8"	2435	936	322		101	44·5	23·8	14·3	6·48	3·54	2·18	1·43	·	1·35	1·93	2·92	4·57	6·60
9"	3335	1281	440		137	60·8	32·5	19·5	8·85	4·85	2·98	1·93	1·37	·	1·41	2·14	3·35	4·83
10"	4393	1688	582		181	80·4	42·9	25·8	11·7	6·40	3·93	2·57	1·80	1·32	·	1·52	2·38	3·43
12"	7087	2723	938		293	129	69·2	41·6	18·8	10·3	6·34	4·15	2·91	2·13	1·61	·	1·57	2·26

figures above the diagonal refer to pipes of nominal diam. of standard weight W.I. pipes.

INFORMATION SHEET : WATER DATA, SUPPLY & TANK SIZES.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

Supplement to THE ARCHITECTS' JOURNAL for November 16, 1933

INFORMATION SHEETS

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WATER DATA, ETC.

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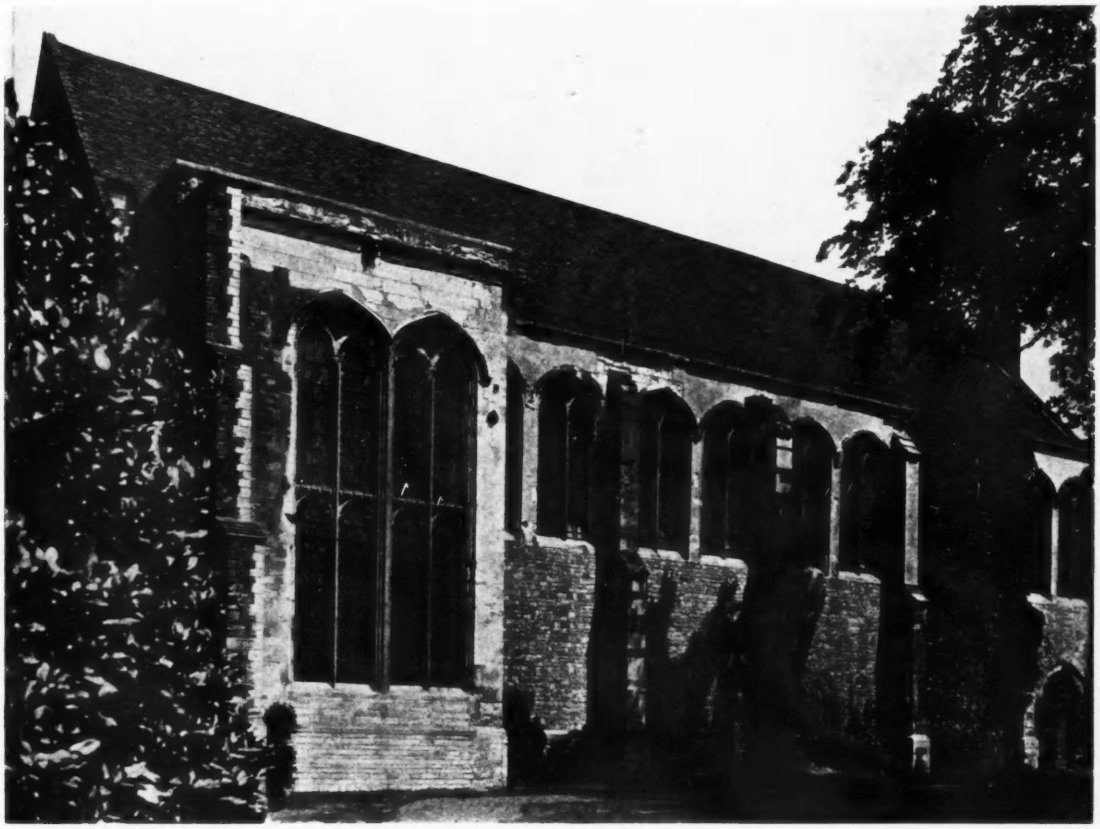
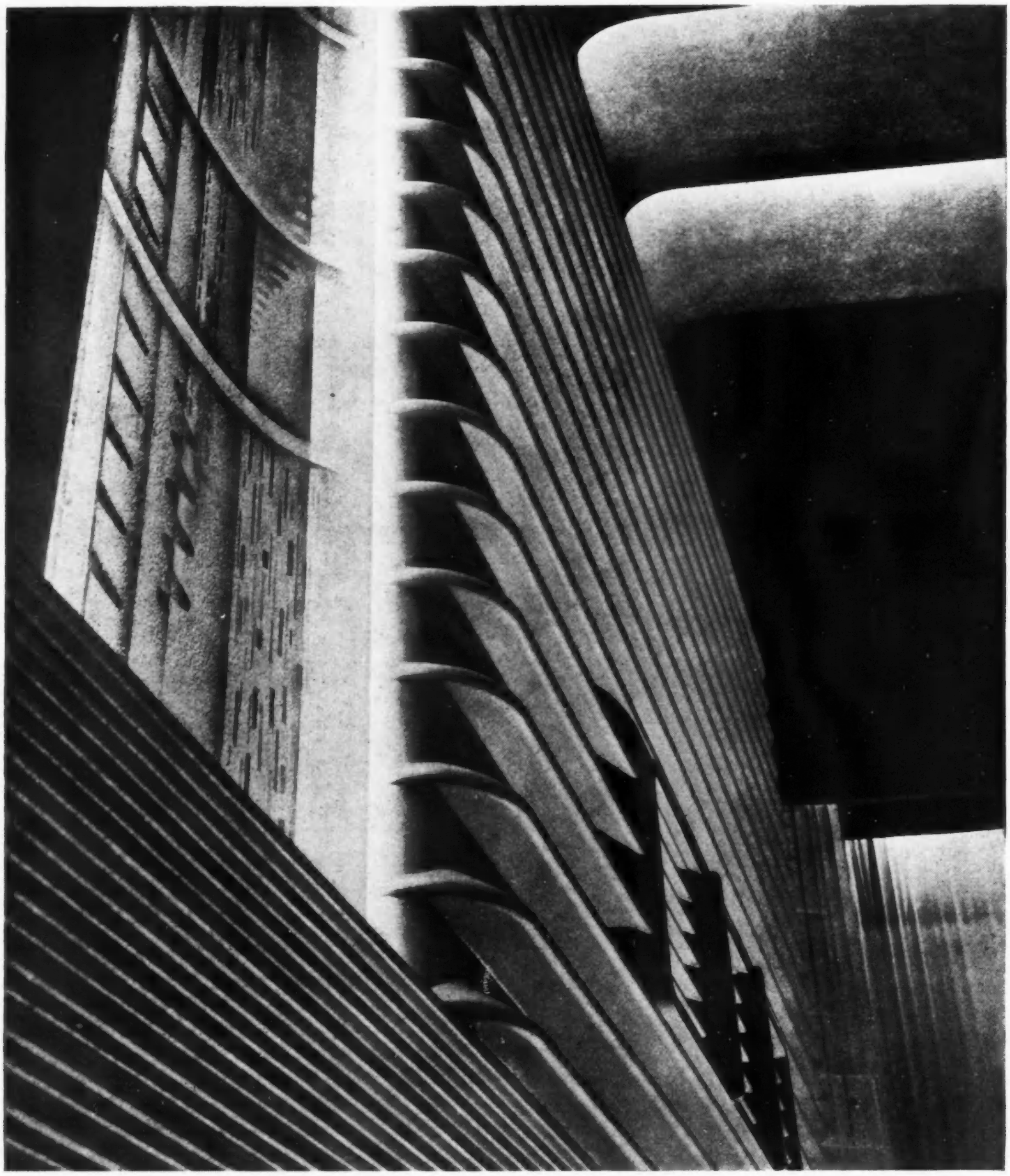
FOR a list of the Information Sheets previously issued, see the other Sheet accompanying this issue.

TO BE RESTORED

THE ROYAL PALACE AT ELTHAM



IT has been announced that Mr. Stephen Courtauld intends to rebuild and restore, for his own use, the Royal Palace at Eltham, of which the above is a photograph of the surviving Great Hall, built in 1479. Mr. Courtauld has taken a 99 years' lease of the property—about 34 acres in extent, which comprises the whole of the site occupied by the old palace and its grounds—and has appointed Sir Charles Peers, the former Chief Inspector of Ancient Monuments, as his architectural adviser.

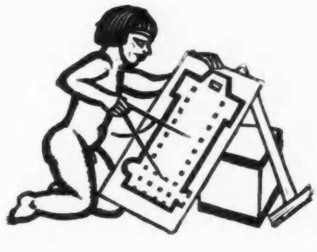


SUBURBAN CINEMA

The Regal Cinema, Wimbledon, designed by Robert Cromie, was opened by the Mayor of Wimbledon on Monday last. Its seating capacity is approximately 2,000, and its stage is equipped for theatrical productions as well as for films.

The above photograph is a detail of the side wall of the auditorium, looking upwards; showing the wall treatment of horizontal corrugations and the ventilation and sound publicity grilles.

The cinema is further illustrated on pages 660-662 of this issue.



MARJORIE AND C. H. B. QUENNELL

IN the hurry and fret of modern professional practice, there is one aspect of an architect's activities that is increasingly neglected at the present time—his function as an educator. It is easy enough to lament the public diffidence, and even intolerance towards what may seem to the trained designer a thing of new and exciting beauty. As in most other spheres of contemporary art, the younger architecture is often too reluctant to make its concession to the susceptibilities of the untrained observer, the man in the street ; too often chooses to *épater* where it would be wiser to woo with tact, determination and understanding. Modern conditions would seem to call for the establishment of some kind of *liaison* staff between professional ardour and public apathy—for everybody nowadays will admit that it is necessary to educate opinion before you can hope to influence it.

Architects as a body, however, and particularly in this country, have so far done little or nothing to create a favourable atmosphere for experiment ; and in the field of craftsmanship the situation is, if anything, worse. Here the continued neglect of firm and appropriate beauty is all too evident from the shoddiness and insignificance of the objects produced for our ordinary domestic requirements, those " everyday things " by which alone we shall be judged in the cold uncompromising light of future archæology.

The publication of a third volume* of *A History of Everyday Things in England*, guides our searchlight to the upright assiduous figure of C. H. B. Quennell, an architect as well as author, who has done so much to make the study of the past alive and interesting, and to encourage a new outlook towards history, and a new conception of its teaching. Mr. Quennell feels strongly, for instance, that there is a tang of sawdust and ashes about the usual secondary school curriculum, largely conditioned by the inexorable framework of the School Leaving Certificate. He endeavours to galvanize into life the dry bones of ordinary "history"—the everlasting mix-up of kings and battles and political skirmishings, which he regards as excrescences of comparative insignificance on the main trunk of working human life. With the help of his wife as an able illustrator, he brings insight and intuition to the reconstruction of social history, and is striving to rouse and educate the taste of young people to a revolt against the slipshod and makeshift methods of cheap mass production. As a clear unpriggish account of the origin and development of everyday objects and utensils, the volumes, of which this is the latest, have the doctrine of " functionalism " as their continued thesis, but functionalism shorn of its querulousness and pseudo-scientific trappings. They show how ordinary people made and ornamented ordinary objects for ordinary purposes through eight centuries with skill and enthusiasm, and their moral should be obvious to anyone who, having digested it, should happen to wander among the wares of any modern multiple bazaar.

If, as used to be said, amateurs and others outside the profession were formerly responsible for some of the most notable books on architecture, here is a case of a practising worker who has had a striking, definite and permanent influence. What is, however, perhaps the greatest asset of both author and illustrator is that both understand their public so perfectly—never for a moment talk down to it or above its head, but talk *to* it in a language that it understands and a voice that compels interest. Their method stands as a model for the type of *liaison* work that we have suggested.

With a certain scholarly casualness spiced with a whimsical and, at times, freakish humour, these volumes manage to convey a great deal of vital, varied information vividly and amusingly and in a manner the least possibly pedagogic. Indeed, the authors would be strongly opposed to making a series of carefully systematized textbooks. Their eagerness overlays a stubborn determination to grapple with the problems and complications of life, and to it all they bring a warm sympathy, joined to an enquiring curiosity, about the ordinary folk and how they worked and produced and triumphed, and fought and prayed and played. Their affection is for the great body of humanity as a whole, and they would recoil from any technical Marxian discrimination in favour of a specialized proletariat.

It is not too much to say that their work has helped greatly and will continue to influence increasingly the present generation of both teachers and school children—and, in fact, the whole population, to a view of man as a producing worker, and to an appreciation of architecture in the strategic place in the historical picture which is intrinsically due to it.

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* *A History of Everyday Things in England.* Part 3. The Rise of Industrialism, 1733-1851. By Marjorie and C. H. B. Quennell. London : Batsford. Price 8s. 6d.

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NOTES & TOPICS

ERICH MENDELSOHN

THERE have long been rumours, but now the cat is finally out of the bag. Erich Mendelsohn is to practise in England in partnership with Serge Chermayeff.

*

There are people who will have a feeling of something like resentment at what they will consider to be encroachment on their professional field. Such a feeling is the result of fear.

*

I think a more logical, and certainly more generous, outlook is that taken by the Liverpool School of Architecture, which has already welcomed Mendelsohn and heard him lecture.

*

Architecture is becoming less and less a matter of nationalism, and we must not, as architects, be parochially-minded.

*

As Professor Reilly said: " When a great man moves from one country to another, the country that receives him adds almost a continent to its empire."

DECENCY FORBIDS AND COMMERCE CAN'T COMPEL

Hats off to the Winchester Town Council for their decision about a boot and shoe store which wanted to shove a 9 ft. fascia with 4 ft. 6 ins. lettering into the front of an elegant little eighteenth-century building. Hats off to Sir Hilton Young for dismissing the appeal brought against the decision of Winchester's Council.

*

This is the first decision dealing with a shop fascia under the new town-planning powers of local authorities. A good start, but prohibition by itself leads nowhere. Who is going to be responsible for showing traders who think of this sort of thing what they could do?

*

What about the Royal Society of Arts? They can't say they aren't interested in street elevations, for they have bought both sides of a village street in Bucks. There is, rightly, magic in the word *Royal*. Traders would listen to them all over the country if they undertook on a big scale (as they could) what the Design and Industries Association has been undertaking on a modest scale for years.

*

Oh, for an act of union between all these overlapping societies. One voice of authority that would be heard, and an end to polite nothings and timid tinkerings.

THE HUMAN POINT OF PLANNING

When Dr. Neurath lectured last week on the Vienna method of pictorial statistics as applied to town planning, he said that academic statisticians were apt to criticize the vivid, graphic language of symbols he uses and enquire in their bleak, academic way after the *decimal point*.

*

His reply is a permanent reproof to the unimaginative. " It is far better," he said, " to remember an approximate figure than to forget an accurate one."

*

The increased use of Dr. Neurath's system of pictorial statistics may in time humanize our attitude towards figures, so that we realize that plans are made for human beings and not for the sport of accountants.

MORE EMPLOYMENT MURDERED

Meanwhile these dry, unseeing creatures who are trying to make civilization a matter of book-keeping, without the single entry of a new idea, have impelled the Improvements Committee of the L.C.C. to abandon the big scheme of rebuilding at the Elephant and Castle on which £1,950,000 was to have been spent.

*

The scheme, which was originally approved by the Council in 1931, has been jettisoned because a grant promised from the Road Fund is now withheld by the Minister of Transport. Mr. Oliver Stanley holds the view that the grant must be indefinitely postponed.

*

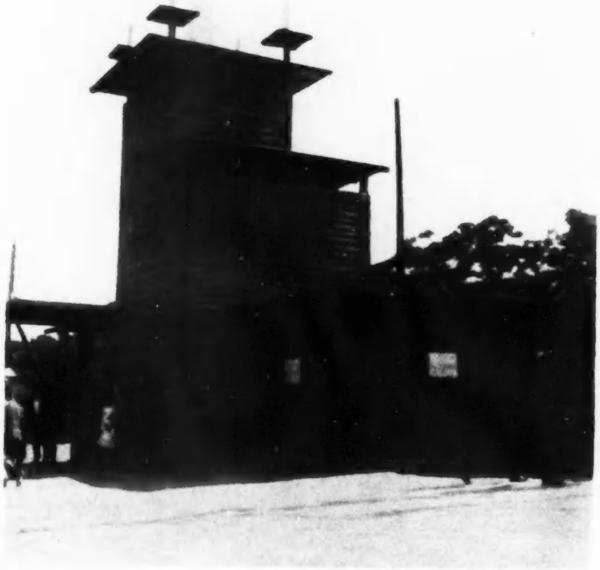
So a cheaper scheme is to be prepared, and another chance of doing a job well has passed out of what is for some reason known as " practical politics."

" THE EVENING STANDARD " AND SLUM

The Evening Standard is one of the few evening papers to treat house design with respect. And by the same portents its slum clearance policy has been a good deal more than a mere anti-government stunt.

*

The solution propounded by its anonymous correspondent in the issue for Monday last was not complete; was indeed a little confused and difficult to read as one, and not as a hash of several solutions; but it was serious,



One of the temporary buildings erected at Gödöllö, Hungary, for the World Scout Jamboree recently held there. The buildings (mostly in wood) were designed by students of the Budapest Polytechnic School, and the work was largely carried out by unskilled labour given by scouts during week-ends.

and based upon " long term " and thoughtful reasoning—a matter for congratulation.

*

I would like to suggest that *The Evening Standard* now invite one or two other men and women with ideas to present the situation as it appears to those best able to judge the realities of this tremendous national problem.

STREET LIGHTING

Lewisham Borough Council, I observe, has decided to light, electrically, seven miles of streets. I hope that this may be made the occasion for demonstrating to all other municipal bodies throughout the country what *good* street lighting can be.

*

When I consider how much attention interior lighting receives, how specialised it now is, I marvel at the slap-dash way in which we treat our roads.

*

The one exception, practically, is The Mall—which is also an object lesson. The *efficient* part of that installation is in the diffused light from the central standards—not the dazzle from the naked high power arc lamps.

*

When will people begin to learn that in all illumination for practical purposes it is not *quantity* of light that matters, but *quality* ? To the Borough of Lewisham I commend this great opportunity—and those magic words " diffusion," and " distribution."

" NYMPH ERRANT "

I can't say I was very impressed by the settings which Miss Doris Zinkeisen has designed for this piece, although I suppose the standard is high in that particular character.

*

" Aunt Ermyntrude's garden, at North Oxford," is in itself a gorgeous joke, and a damning indictment of the domestic architecture which our cultivated and cultured University towns tolerate—and even enjoy.

*

But this, of all the six sets which offered architectural possibilities, was the only one which took advantage of them. (For charity I give a mark or two to " Neauville-sur-mer.")

*

" Some Ruins in Athens " might have been something good—dramatically as well as architecturally. What we get is a classic portico with *five* columns, looking as if they were made of Edinburgh rock.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, November 23

EXHIBITION OF " MODERN LIVING." At *Whiteley's, Queen's Road, W.2.*

EXHIBITION OF FINISH FURNITURE. At 181 *Piccadilly, W.* Until November 24.

INSTITUTION OF STRUCTURAL ENGINEERS. At 10 *Upper Belgrave Street, S.W.1.* " Building Regulations." By Roland Woods, M.B.E., LL.D. 6.30 *p.m.*

INSTITUTION OF MECHANICAL ENGINEERS. (Yorkshire Branch.) At the *Queen's Hotel, Leeds.* Address, by A. H. Gledhill, M.I.MECH.E. 7.30 *p.m.*

Saturday, November 25

ARCHITECTURAL ASSOCIATION. At 34-36 *Bedford Sauare, W.C.1.* " The Housing Problem : How the Problem is Solved Abroad." By F. R. Yerbury, HON.A.R.I.B.A. 3 *p.m.*

Monday, November 27

ROYAL SOCIETY OF ARTS. At *John Street, Adelphi, W.C.2.* " Colour Block Prints " (Lecture II). By Hesketh Hubbard, R.O.I., R.B.A. 8 *p.m.*

INSTITUTION OF ELECTRICAL ENGINEERS. (North-Eastern Centre.) At *Armstrong College, Newcastle-on-Tyne.* " The Application of Automatic Voltage and Switch Control to Electrical Distribution Systems." By W. Kidd and J. L. Carr, B.SC. 7 *p.m.*

Tuesday, November 28

INSTITUTION OF ELECTRICAL ENGINEERS. (South-Midland Centre.) At the *Grand Hotel, Birmingham.* Annual Dinner.

CAMBRIDGE UNIVERSITY ARCHITECTURAL SOCIETY. At *Mill Lane Lecture Rooms.* " Industrial Patronage of Architecture in the Future." By John Gloag. 8.15 *p.m.*

ROYAL SOCIETY OF ARTS. (Dominions and Colonies Section. At *John Street, Adelphi, W.C.2.* " Problems of Population in Palestine." By E. Mills. 4.30 *p.m.*

MORLEY COLLEGE. At 61 *Westminster Bridge Road, S E.1.* " The New Architecture of Holland, Denmark, Sweden and America." By Frederick Towndrow, A.R.I.B.A. 8 *p.m.*

Wednesday, November 29

ROYAL SOCIETY OF ARTS. At *John Street, Adelphi.* " A Theory of Colour Co-ordination." By Mrs. M. Sargant-Florence, N.E.A.C. 8 *p.m.*

ST. PAUL'S ECCLESIOLOGICAL SOCIETY. At the *R.I.B.A., 9 Conduit Street, W.1.* " A Talk on the Subject of Reredoses." By Professor A. E. Richardson, F.R.I.B.A. 8 *p.m.*

FEDERATION OF PROGRESSIVE SOCIETIES AND INDIVIDUALS. At the *Memorial Hall, Farringdon Street, Ludgate Circus, E.C.4.* " Slum Clearance or Slum Muddling ? " Speakers : Rt. Hon. Arthur Greenwood, M.P., Clough Williams-Ellis, F.R.I.B.A., and E. Maxwell Fry, F.R.I.B.A. 8 *p.m.*

NEWS

POINTS FROM THIS ISSUE

The shoddiness and insignificance of the objects produced for our ordinary domestic requirements 653

" When a great man moves from one country to another, the country that receives him adds almost a continent to its empire " 654

A plea for the appointment of a Royal Commission on Housing and Planning 663

We are more careful to avoid sewer gas than unsightly advertisements 663

A building especially designed to resist floods 669

The first of a series of biographical notes of the principals of the architectural schools 675

ENCOURAGEMENT

The unemployment figures issued this week make good reading for those connected with building and give eloquent testimony of the success of the efforts of the Special Committee for Public Relations of the Building Industries National Council.

The number of unemployed in the building side of the industry, at 175,400, is the lowest recorded in any October since 1930, and compares with 255,500 in 1932, and 211,600 in 1931. The result of the year's work of the Committee is reflected in this reduction of 80,000 in the numbers unemployed.

The figures indicate, however, that the condition of the public works side from this point of view is still grave. The figures recorded for each month of this year have constituted a record for that month, the figure of 129,300 for October comparing with 124,100 for 1932 and 91,200 for 1931.

The contrast between the fortunes of the two sides of the industry conclusively demonstrates the need for the continuance of the work of the Committee and for the building up of a fund to render it effective. The public must realize that the fundamental economic conditions governing both sides of the industry are substantially the same.

Subscriptions towards the funds of this Committee should be addressed to the Hon. Treasurer, at 5 Duke Street, Adelphi, W.C.2, and should be made payable to " The Special Committee for Public Relations."

MENDELSOHN IN LIVERPOOL

A remarkable welcome was given to Erich Mendelsohn when he visited Liverpool on Friday last, to deliver at the University School of Architecture his first public lecture in England, and when Professor C. H. Reilly announced that Erich Mendelsohn was going to work in London in partnership with Mr. Serge Chermayeff (writes our Liverpool correspondent).

The lecture was a conspectus of Mendelsohn's own work, illustrated with slides of his sketches, plans and finished buildings. He described the rise of the revolutionary movement from the erection of the Gallery of Machines at the Paris exhibition of 1889, and said the changes of the last 80 years were the story of the crisis from which humanity was now suffering. He continued :—

" The causes are as clear today as the solutions are still in darkness. It is a process of fever, in which the old world will either die or will be healed to live as a new world, which will have as little and as much in common with the old as the architecture of the past with the architectural face of the present. It will not change the essential laws of our being but it will express them in terms of new forms. The inevitability of this process has long been foreseen by architecture. It is because it is creative that it is working on new things. It is for that reason that it has not been surprised by events. In fact, events have confirmed the rightness of its prophecy.

" The constructional problems of our time demand from the architect the greatest capacity for work, the greatest responsibility. The solution is not achieved through the adaptation of old forms nor through the copying of mere modishness, but through the creation, out of the most elementary conditions of each building, of the most intelligent plan, the most logical construction, the most balanced form."

In an interview Erich Mendelsohn said he was surprised and delighted by the very rapid development of the new architecture in England since his last visit three years ago. The ground had been prepared for really thrilling work, of which the Liverpool School was an excellent example. He thought it the duty of the younger generation to be revolutionary. " We have found the elements of a new style," he said, " and the younger generation must work it out and find the equilibrium."

Mr. B. T. Howells, president of the Architectural Students' Society, proposed a vote of thanks, Mr. J. Alcock seconded, and Mr. W. Kockmann, a new German student, supported the vote in German. Professor Lionel Budden presided.

THE KING'S SPEECH AT THE OPENING OF PARLIAMENT

H.M. the King, in his speech at the re-opening of Parliament on Tuesday last, said : " My Ministers intend, in conjunction with the local authorities, to press forward with the improvement of housing conditions by the clearance or reconditioning of houses unfit for human habitation, and their replacement, when demolished, by dwellings which accord with modern standards and can be let at reasonable rents."

£500,000 HOTEL SCHEME

Plans for a new hotel for Liverpool to cost, with the land, £500,000, were approved by the Liverpool Licences Transfer Session on November 7. Mr. A. E. Shennon, F.R.I.B.A., is the architect.

STANDS AT B.I.F., BIRMINGHAM

Exhibitors' stands at the Birmingham Section of the British Industries Fair are being remodelled on modern lines as a result of a suggestion made by the Duke of York.

When he toured the Fair on the opening day last February, the Duke pointed out that it should be possible for visitors, when they were actually on the stands, to see at a glance the exhibitors' name, address and description of his products. The Duke remarked : " You like to feel that you are a little bit intelligent when you are shaking a man by the hand."

" Acting on the Duke's advice," states the Chairman of the Management Committee, " we are adopting modern ' open stands,' with names and other details clearly shown at the back in place of the ' closed-in,' four-poster bed type of stand encumbered with unnecessary superstructures and overhead signs which could only be read from the gangways."

WEST YORKSHIRE SOCIETY OF ARCHITECTS

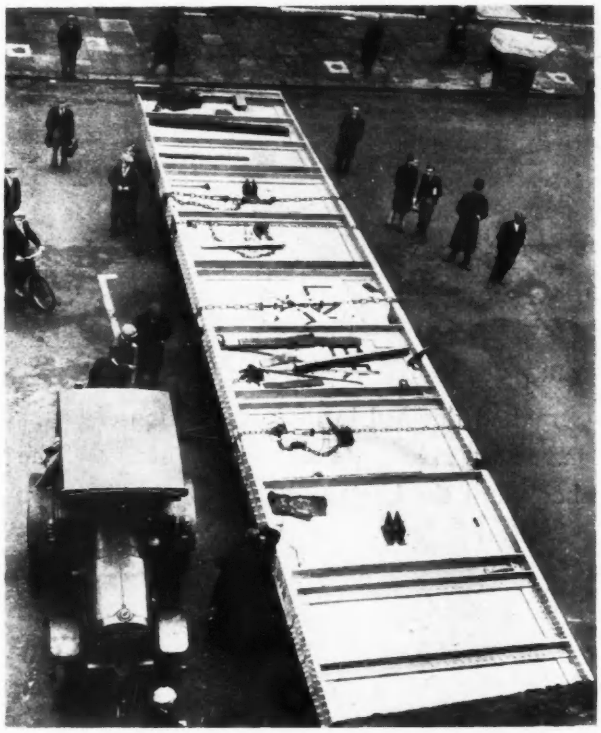
Mr. B. R. Gribbon, F.R.I.B.A. (President), occupied the chair at a meeting of the above Society, held at Huddersfield on November 16, when a lecture on " The Satellite Town," was given by Mr. A. W. Kenyon, F.R.I.B.A.

The lecturer, after showing many lantern slides illustrative of satellite towns, said there could be no doubt that the planning of such towns gave great scope to architects, who should band themselves together and see that such matters were not left wholly in the hands of legislators.

A vote of thanks to Mr. Kenyon was moved by Mr. Norman Culley, F.R.I.B.A. and seconded by Mr. W. Alban Jones, A.R.I.B.A.

ADVISORY COMMITTEE ON TOWN PLANNING

Viscount Elmley, in the House of Commons last week, asked the Minister of Health if he would state when the Advisory



A steel girder, 60 feet long and weighing 35 tons, being transported to the site of the new R.I.B.A. building. See note below.

Committee on town and country planning would be constituted.

Sir Hilton Young said that this Committee would be set up forthwith, and he was asking a number of representative organizations to suggest the names of suitable persons.

Further Parliamentary News appears on page 676.

EXHIBITION

The eleventh annual Applied Arts and Handicrafts Exhibition is to be held at the Royal Horticultural Hall, Vincent Square, S.W.1, from November 29 to December 9, between the hours of 11 a.m. and 8 p.m. The Exhibition is to be opened by Mr. Ernest Thesiger.

R. I. B. A.

R.I.B.A. NEW BUILDING

Last week the first of two large girders, which are to go over the Banqueting Hall of the new R.I.B.A. building, was brought from the works of Messrs. Matthew T. Shaw & Co., Ltd., at Millwall, to the site. These plate girders are 60 ft. long by 12 ft. deep and weigh 35 tons.

The girders were too large to go across the small swing-bridges which connect the Isle of Dogs with the mainland. The first girder was, therefore, lowered into a barge, which was towed round to the Albert Docks. The Port of London Authority lent a floating crane to lift it from the barge to the lorry. It was taken through the streets of London on Wednesday night, November 15, and reached the site at 6 o'clock on Thursday morning. It was turned across Portland Place and taken through the main entrance, entirely blocking the traffic for some hours. It was finally hoisted into position on its stanchions on Monday morning, November 20.

The operations were filmed by the Gaumont-Graphic News for showing in their news-reel.

LONDON ARCHITECTURE MEDAL

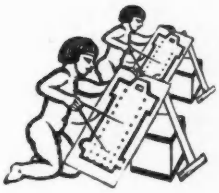
The Council of the R.I.B.A. announce that the latest date for the submission of forms for the London Architecture Medal, 1933, is February 28, 1934. The award is made for a building completed during the three years ending December 31 next. Nomination forms and conditions are now obtainable from the Secretary of the Institute.

CONFERENCE OF TEACHERS

A conference attended by teachers at Schools of Art and Technical Institutions was held at the R.I.B.A. on Saturday, November 4. The chair was taken by Mr. T. A. Darcy Braddell, F.R.I.B.A., Hon. Secretary of the Board of Architectural Education, and a paper on "The Organization of an Architectural Course," was read by Mr. Joseph Addison, M.C., F.R.I.B.A.

At the conclusion of the conference the members inspected the Exhibition of Designs of Students exempted from the R.I.B.A. Intermediate Examination.

COMPETITION



NEWS

ELECTRICAL KITCHENS

The British Electrical Development Association is holding a competition for designs of electrical kitchens suitable for (1) a house (or flat) valued at £300-£400 (net building cost without land), and (2) a house (or flat) valued at £800-£900 (net building cost without land).

The object of the Competition is to improve the design and arrangement of domestic kitchens in which electricity is used for all ordinary purposes, i.e., at least for cooking, washing, ironing and efficient lighting. The assessors are: Messrs. R. S. Downe, M.I.E.E., Francis Lorne, F.R.I.B.A., Lionel G. Pearson, F.R.I.B.A., A. C. Cramb, M.I.E.E., M.I.M.E., and Miss Maughan, M.SC., Principal, National Society's Training College of Domestic Subjects. Premiums: £50 and £25, for each section.

Designs are to be sent to the Association at 2 Savoy Hill, W.C.2, not later than January 15, 1934. Conditions, etc., are now obtainable.

Competitions Open

December 2.—Mr. J. P. Turner, J.P., of Cardiff, invites architects and town planners to submit designs for the lay-out of a building estate of about seven acres at Penylan Hill, Cardiff. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £100, £50 and £25. Conditions, etc., obtainable from E. Turner and Sons, Ltd. Penarth Road, Cardiff. Deposit £1 1s.

December 15.—Sending-in Day. Messrs. Jenson and Nicholson invite designs for the decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.: and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1.

December 29.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor: Thomas S. Tait, F.R.I.B.A. Premiums: £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1. The conditions were reviewed in our issue for September 28.

No date.—The Stoke-on-Trent City Council invites competitive designs for a proposed Mental Colony to accommodate 500 patients. The assessor is to be appointed by the President of the R.I.B.A. Premium £300. Copies of the proposed scheme and conditions of the competition are obtainable from E. B. Sharpley, Town Clerk, Town Hall, Stoke-on-Trent.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor : H. S. Goodhart-Rendel, F.R.I.B.A. Premiums : £150, £100 and £50. Conditions have not yet been drawn up.

Proposed Extensions to the Town Hall, Swindon. Assessor : Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor : R. S. Wilshere A.R.I.B.A.

Proposed Town Hall and Municipal Buildings, Stoke Newington. Assessor : Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

The late Thomas Mawson

We regret to record the death of Mr. Thomas Hayton Mawson, which took place on November 14, after an illness extending over some seven or eight years. He retired from active practice with the firm of Thomas H. Mawson and Son, Landscape Architects and Town Planning Consultants, of Lancaster, in 1925.

Mr. Mawson, was some time original member of the Royal Fine Arts Commission, Liveryman of the Worshipful Company of Gardeners, lecturer on Civic Design to the University of Liverpool, Doyen of the International Commission for the Rebuilding of Salonika, Order of the Redeemer (Greece, first class), Fellow of the Linnean Society, Past President and Foundation Member of the Town Planning Institute, Past President and Foundation Member of the Institute of Landscape Architects, Member of the Council of the National Housing and Town Planning Council, Honorary Corresponding Member of the American Society of Landscape Architects, Member of the Art Workers' Guild, Member of the Royal Arboricultural Society of Scotland, and the author of a number of technical and other works.

He was 72 years of age.

Recent Wills

Alderman S. French, F.R.I.B.A., of Cambridge, left £11,097 (net personalty nil).

Alderman R. B. Mather, of Messrs. R. B. Mather, Sons and Wilding, architects and surveyors, of Blackpool, left £269,091 (net personalty £120,787 7s. 7d.).

THIS ARSHETECTURE

Come and see the best semi-detached houses yet built. A well-known architect has showered high praise on them :—

“ *Superior in every way to the ordinary 3 bedroom house.*”

Ladies will be delighted with the Spacious Hall, Large Reception Rooms, Kitchen with Serving Hatch and Utility Cupboards, while the Tiled Scullery and Marbled Pantry must be seen to be believed.

From and advertisement in the HOUSELAND GAZETTE AND ESTATE NEWS.

“THE ARCHITECTS’
OF PLANNED

When we published the first Sheets of the Information Book of Sir John Burnet, Tait and Lorne in this JOURNAL, it was clear to certain observers that a new era had dawned in the presentation of factual data.

We have been able to publish in advance 54 of the 150 Sheets in the book, but the book itself is now due to be published, by the Architectural Press, 9, Queen Anne's Gate, Westminster, S.W.1, and publication of the Sheets in the JOURNAL will therefore be discontinued.

The reception which they have had, however, makes it clear that they have provided an essential service. It would not be true merely to say that they were popular ; they have been accepted almost automatically as the inevitable solution to one of the intricate problems of architectural practice ; they have simplified office technique ; they have demonstrated the superiority of planned information over unplanned.

Their case has been proved so unequivocally that we should in any case feel under an obligation to try to prolong the series. What we propose to do now is rather more than that. If it is remembered that concise information prepared in an accessible standardized form and dealing with every kind of method used in the practice of building, is urgently required in the draughting office, and if it is further remembered that the Information Sheet is the perfect medium for presenting vital information of this kind, it becomes clear that what is wanted is a library of Information Sheets.

This library it is now our aim to build up in the pages of the JOURNAL, a library which will present in a “ rationalized ” form the facts about building materials, equipment and methods, as well as general planning and construction data.

In the case of products and materials a mass of information is already, of course, in the hands of the manufacturers, but when it is borne in mind that this has to be sifted and compressed into a standardized form suitable for filing and reference, a process involving a great deal of laborious and expert selection, it will be realized that this is neither an easy task nor one which on the

JOURNAL" LIBRARY INFORMATION

score of cost would normally be practicable. We are prepared to organize this work provided we can obtain the collaboration of the other people involved, and to make the scheme immediately practicable we have agreed, after numerous consultations, to invite the manufacturers who use the advertisement columns of this JOURNAL to put certain of their pages at our disposal. In these pages, we propose, again with the help of the manufacturers, to prepare and publish Information Sheets which will give in a concise form the facts about each product. A number of manufacturers have already accepted this offer in an admirable spirit of co-operation, and we on our side have agreed to publish the pages so prepared as loose supplements in the JOURNAL, so that the reader may begin at once to compile his Information Library.

In our opinion, however, the responsibility for the selection, preparation and supervision of these Sheets should be in the hands not only of experts, but of experts independent of this JOURNAL. Sir John Burnet, Tait and Lorne have agreed to undertake for us both the production and the general editing of this series. Their model will be their own Information Book, and they will retain the right to reject any material which would in their opinion not be acceptable for inclusion in the library.

A last word. Lest it should be thought that we are taking credit to ourselves for this effort to rationalize information, it should be said at once that this JOURNAL is merely the soil—fertile let it be hoped—in which the seed has been sown. The sower is Mr. Francis Lorne, who with his partners and staff has now worked for years to bring into being just such a scheme as has been outlined above. He and his colleagues have already given the profession the fruits of their researches in their Information Book, which is about to be published. This new development is really the outcome of a plot which has been hatching for a considerable time in the neighbourhood of the British Museum, a plot to bring up to date the whole technique of Information—to standardize it, to simplify it, to plan it—so that the ways of the manufacturer may be made plain, and the way of the architect a little easier.

INDEX AND FILING SYSTEM

FOR THE LIBRARY OF PLANNED INFORMATION

Since this library is planned so that it may be built up gradually from the pages of the JOURNAL, *two things are clearly necessary—an adequate system of filing and an index.*

There are a number of filing systems, and some claim to be fool-proof. The weakness of fool-proof systems is that they tend to be complicated. A complicated system defeats its own ends, for few people can afford the time and labour to get it going and those who get it going seldom keep it going.

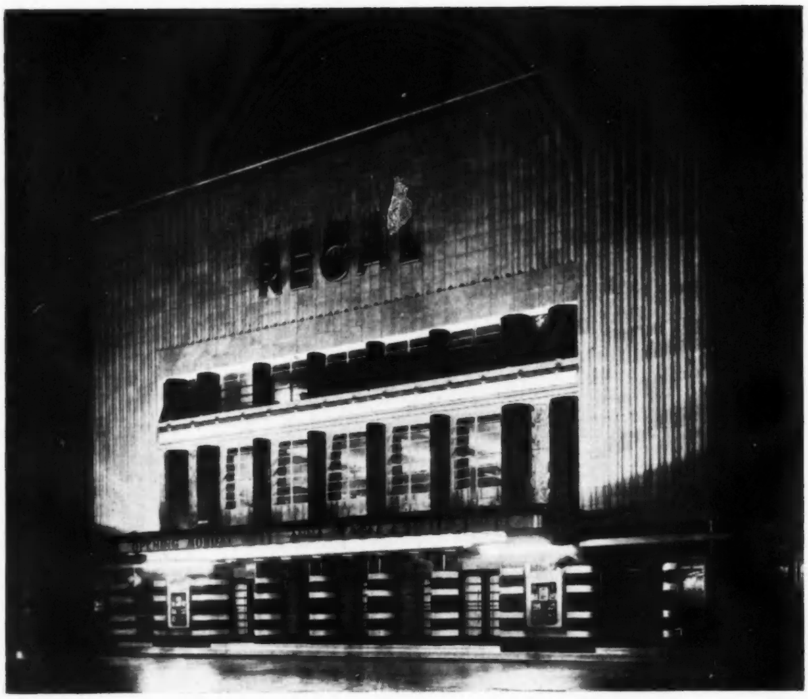
The temptation is to invent some new and dazzling system. After careful consideration the editors have decided to do no such thing. Every individual reader has his own views on filing, and his own filing system (or lack of it) already in use. It has been decided, therefore, simply to affix, as in the previous series, a number to each Information Sheet. But a space is now provided at the top of each Sheet for the architect's own reference, if he wants one.

By this means he can build up the library so that it will dovetail into his own method of filing.

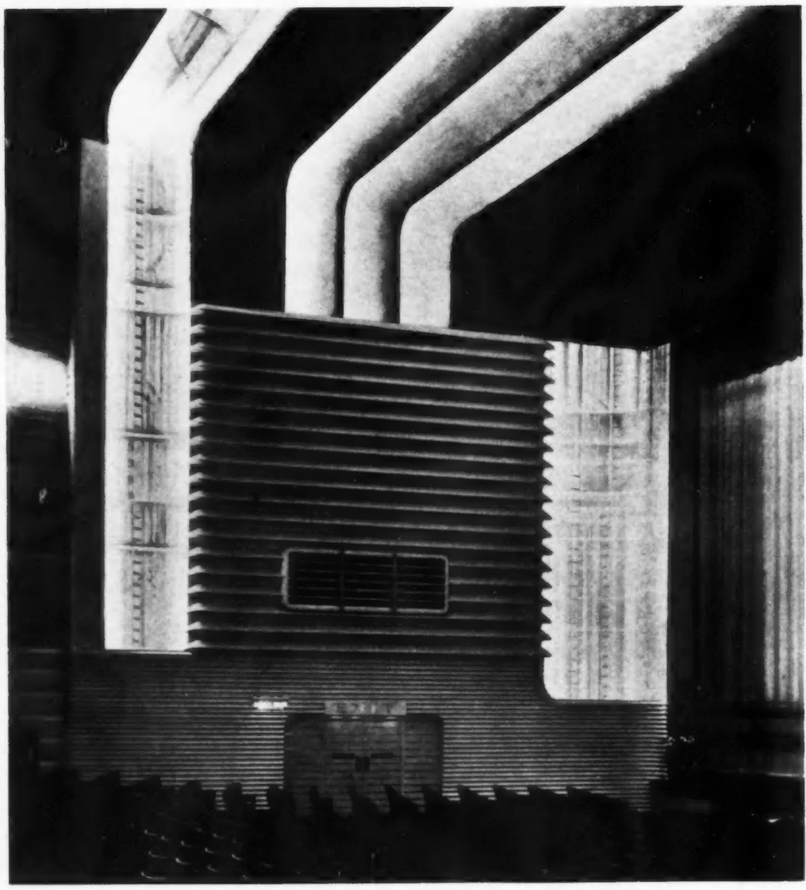
At suitable intervals a complete index will be published. This will be cross-indexed under sub-heads of MATERIALS, MAKER'S NAMES, *etc. Again, in the index a column will be left blank so that the architect may fill in his own reference number.*

For covers, an ordinary spring-back folder is recommended by the editors. Those who require further information or advice on any point relating to this library should address their enquiries to the Editor of this JOURNAL.

REGAL CINEMA, WIMBLEDON:

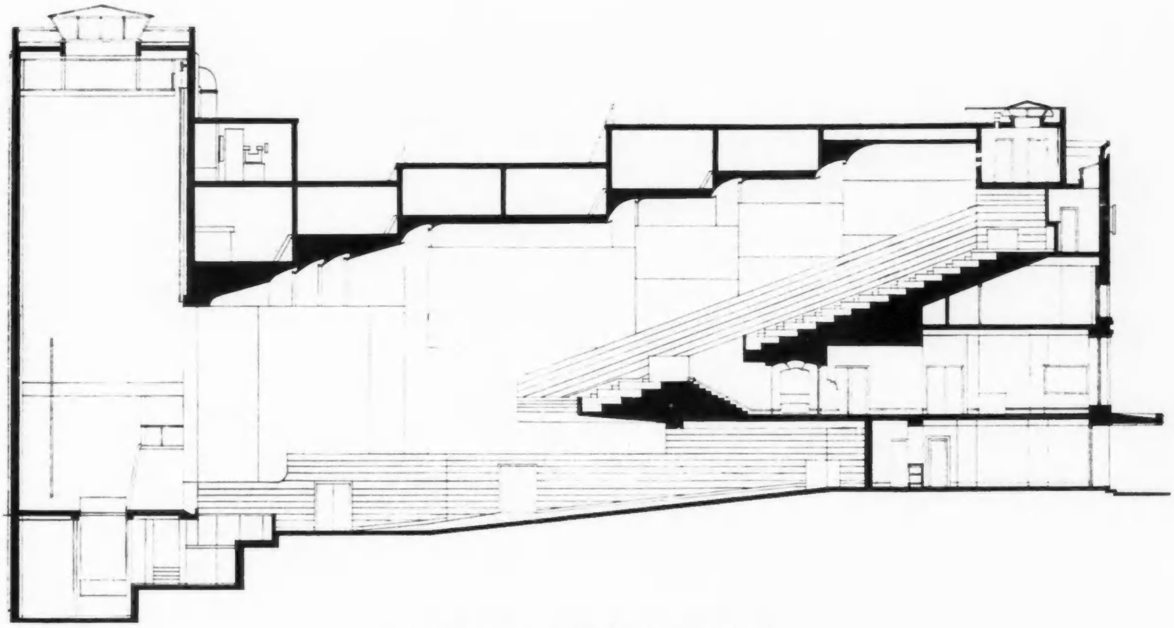


The exterior, photographed at night. It is faced in granite, with vertical flutings, and has a black and cream banded base. The large central window is divided by columns of black faience, and filled with metal grilles.

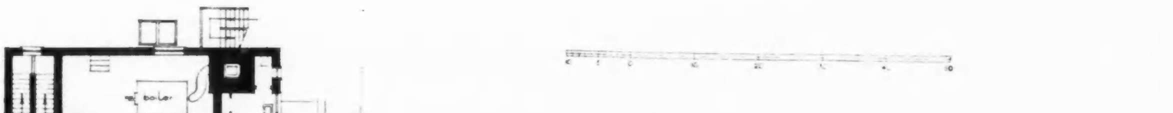


The side wall of the auditorium, showing, on the right, the edge of the proscenium arch, with the organ outlet grille over it. The predominant colours are gold, pink and silver. The dadoes are formed in wood and sprayed over with textural plaster work. A detail photograph of this wall is given as this week's frontispiece.

DESIGNED BY ROBERT CROMIE

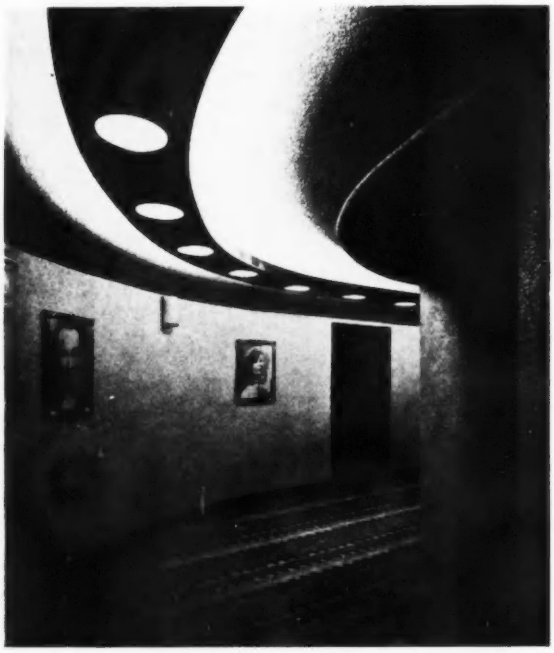


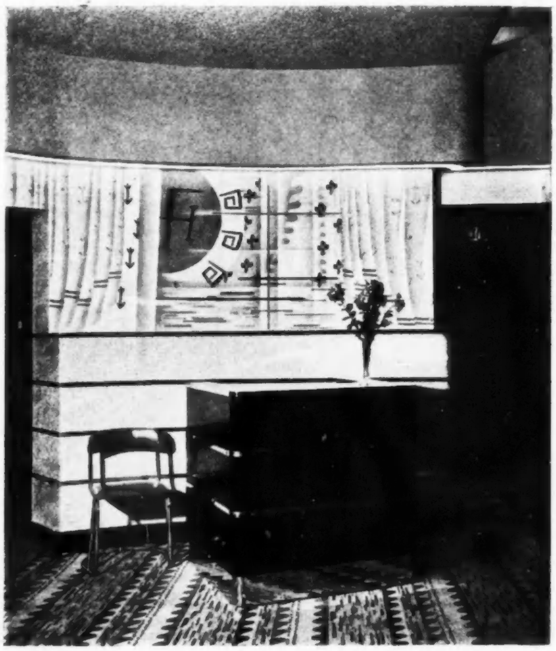
LONGITUDINAL SECTION


boiler
house
gents
lobby
exit passage way
exit
exit
lobby
office
exit
gents
up to rear balcony
up to café
exit
stage
orchestra
pay
kiosk
entrance
hall
pay
pt
exit
up to rear balcony
up to lower balcony
ladies
exit
exit
ladies
lobby
exit
exit passage way

MAIN FLOOR PLAN

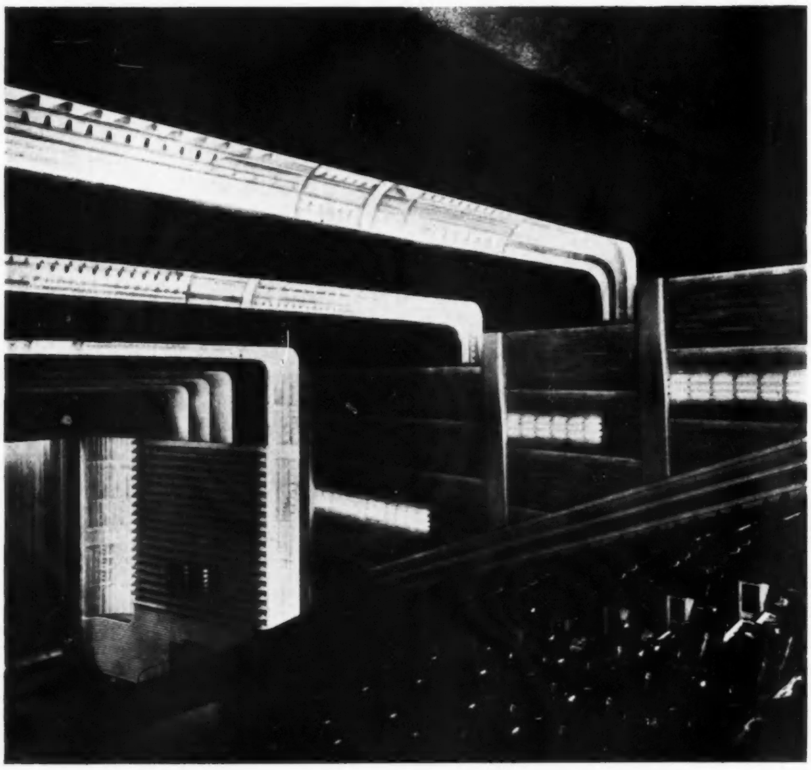
REGAL CINEMA, WIMBLEDON





The photographs above show: left, a vestibule leading to the café and to the balcony; right, part of the interior of the café.

The café, which accommodates about 100 people, is placed at the front of the building, over the main entrance hall, and is accessible from all parts of the cinema, as well as directly from the street. Both the café and the entrance hall are finished in a similar way to the auditorium in sprayed plaster, the former having horizontal bands of aluminium, and chromium-plated steel furniture.



Left: a view looking into the auditorium from the back of the gallery, showing the proscenium opening at the extreme left. The seating is green, and the carpets are in tones of grey, black and red.

DESIGNED BY ROBERT CROMIE

LETTERS *FROM* READERS

C. F. ANNESLEY VOYSEY, F.R.I.B.A.

MAJOR H. L. NATHAN, M.P.

G. B. J. ATHOE,
Secretary, Incorporated Association of Architects and Surveyors

Architectural Diagnosis

SIR,—Many there are rejoicing over Sir Giles Gilbert Scott's inaugural address to the Royal Institute of British Architects. Although full of wisdom as the address was, it kept one in blissful expectation of hearing him say, quite frankly, what were the needs of man in order to preserve a just balance and so to avoid exaggeration. We expected him to remind us that man has a dual nature, material and spiritual, body and soul, animal appetites and desires, and a mind and heart to control them.

As mankind lost confidence in what stood for spiritual matters, he became more materialistic. The heart then was considered of secondary importance to his animal nature. Mechanism became the natural language of materialists, so allowing the higher side of human nature to be stifled by the machine.

Surely practical atheism is the root cause of all forms of ugliness and heartlessness. The excess of body and suppression of spirit. Thus it is we are much more careful to avoid sewer gas than unsightly advertisements. All Sir Giles said seems to me to support this contention. We are deeply grateful to him for such a valuable reminder.

Were the spirit more carefully cultivated, we should feel more reverence for natural law and distinguish more readily between that which affects the body and that which affects the mind, heart and character.

C. F. ANNESLEY VOYSEY

Greater London's Planning Problems

SIR,—The problems of housing, planning and local government in the Greater London Region are daily becoming more difficult and complex.

Despite innumerable legislative provisions, the situation in this vast region is definitely unsatisfactory. The region (also known as the London and Home Counties Traffic Area) covers 1,846 square miles. The London County Council exercises control over some 117 square miles, while the remaining portion is governed by some 164 different local authorities.

Since the war there has been amazing development throughout the region, and millions of money have been expended both by public authorities and by private enterprise. Unfortunately, however, owing to the absence of a rational and properly co-ordinated central plan, numerous costly blunders have been committed which are reacting unfavourably on the well-being and prosperity of London's population.

Never before in our history was there such an urgent need for efficiency and real economy as in this post-war period. Motor transport, electricity and aviation have made gigantic progress. Industry has shown itself mobile. The countryside has been invaded by an appreciative public. The demand for houses and shops has been insatiable. On all sides rapid and startling changes have confronted us, but in the main our leaders have egregiously failed to grasp the realities or the potentialities of the situation.

Consequently, we see today the traffic efficiency of many of our main roads deprecated by unsuitable marginal development. Speculative building has overrun lands needed for open spaces and has wantonly destroyed both urban and rural amenities. The cost of public services has been greatly increased by straggling ribbon development. Blunders such as the L.C.C. housing estate at Becontree, the failure to deal with the Covent Garden site, the muddle of the Charing Cross bridge—all these may be recalled with sorrow and with foreboding for the future.

As regards London housing, the Census of 1931 and the latest Reports of the Medical Officers of Health point to the necessity for a far bolder and more constructive policy.

Have we, indeed, a real housing and planning policy for Greater London today? For instance, is the Government awake to the urgent need for providing London with one or more agricultural belts and for the deliberate planning of new "satellite" towns to be used for the decentralization of industry? In what manner and on what sites will the County Council or the Metropolitan Boroughs rehouse the million inhabitants of the slum areas who cannot be left indefinitely in their present appalling conditions?

These perplexing facts prompt me to suggest that the time is unquestionably ripe for the appointment of a Royal Commission to enquire into and report both upon Greater London's housing and planning problems and also upon the whole question of the future government of the region. It is nearly half a century since the last Royal Commission on Housing was set up, of which King Edward VII (then Prince of Wales) was a sympathetic and keenly interested member. Would it not be of inestimable value to the nation if one of our Royal Princes would agree to serve on a new Royal Commission? The Report of such a Commission might well be the means of saving us from committing further follies and extravagances in this Greater London Region.

H. L. NATHAN

Co-operation in Registration

SIR,—I cannot allow to pass unchallenged a particularly mean and unjustifiable attack upon this Association and its President contained in a circular issued and signed by the Secretary of an allied society of the R.I.B.A.

The signatory's assertions show a woeful ignorance of the facts, i.e., of the very real efforts, made time and again by this Association, to co-operate with the R.I.B.A. in regard to Registration and the well-being of the profession, and of the Association's work on behalf of the unattached, and particularly the young architect and architectural assistant, both in and out of Parliament, with a view to obtaining a "Charter of Liberty" for them.

It appears to me incredible that this circular should have the authority of the R.I.B.A. Council behind it, and I hope that, having this brought to its notice, the R.I.B.A. will take an early opportunity of publishing an emphatic disclaimer.

All the Association and its President demand is a fair field and no favour; but we resent these ill-informed attacks. By this time the responsible R.I.B.A. men must realize that the Incorporated Association is doing useful work and that it has come to stay. With that realization they will discourage such correspondents. It is on these lines, and these lines only, that unity can be achieved.

G. B. J. ATHOE,
Secretary, Incorporated Association of Architects and Surveyors

THE PEDESTRIANS' ASSOCIATION

ROAD PLANNING
FOR SAFETY

[*By T. F. Thomson, A.M.T.P.I.*]

A conference of members of the Pedestrians' Association and delegates from other organizations was held in Manchester on November 18, under the general heading of "The Protection of the Public from Road Traffic Dangers." During the course of the proceedings a paper with the above title, extracts of which are here given, was read by Mr. T. F. Thomson.

THE EXISTING DANGER POINTS

WHAT are the danger points in our street and highway system, and in what ways can they be eliminated?—that is the question we have now to settle. Unfortunately we have no analytical statistics which help us much, but observations readily show that a large proportion of accidents involving pedestrians are, in built areas, due to the danger of crossing busy town or city streets, and to the danger of alighting from, or boarding trams or omnibuses.

The street crossing is a most difficult planning problem, and its solution needs the co-operation of the pedestrian to a greater extent than in many of our other road planning problems. So far as planning is concerned, local authorities have powers now under the Town and Country Planning Act to prescribe street improvement lines in built areas and here the present multiplicity of ownership is, unlike the situation in rural areas, in their favour; because the possibility of whole streets being rebuilt at one time is remote, and therefore compensation, if claimable, can be paid piecemeal. Never before have local authorities had possession of this unlimited power to replan built areas. It behoves them to act courageously (the whole of Manchester has, for instance, been admitted by the Minister of Health to be replannable under the 1932 Act—what an opportunity to be seized or missed) and to merit the praise, and not the curse of posterity.

The problem of safe street crossings for pedestrians cannot possibly be completely solved in the absence of streets sufficiently wide for the proper segregation of traffic going in opposite directions, with centre refuge strips or islands. Yet in many of our busiest cities the main streets are little more than some 25 feet between buildings. First, then, let us begin at the core of our town and replan it. We can then survey and correct our troubles elsewhere.

The cross roads are also a difficult problem, and again planning must provide the ultimate solution. The Ministry of Transport and the Town Planning Institute in collaboration, have produced a satisfactory gyratory lay-out for crossings of almost equal importance, and equally suitable where several roads converge at a point, but it is doubtful whether the somewhat considerable area required for this can be easily secured in built areas; but much may be done by a gyratory system of less ambitious dimensions, assisted, if necessary, by multiple automatic traffic control. In this again the pedestrian must be provided for, which means specially protected surface strips or subways as at Piccadilly and elsewhere. For simple street crossings the synchronized traffic light system cannot be very much improved upon at present.

Road planning cannot, of course, be considered apart from town and country planning. By careful planning of unbuilt land for specific uses, traffic problems, including pedestrian traffic problems, can be minimized to a surprising extent; but it is seldom that we can completely plan and build a town in a mere decade. What, however, it is important to note is that all these immediate problems result from the lack of planning, not merely of roads, but of all our activities.

SINGLE VERSUS MULTIPLE CARRIAGE-WAYS

If there is one point which I would like to make more strongly than another in connection with the subject of road planning for safety, it is the absolute necessity of reversing the present policy of the Ministry of Transport in advocating wide carriage-ways to our main road approaches to towns and cities. Wide carriage-ways are nothing but death traps, there is no limit to the number of lanes of traffic one may provide for, and the more lanes the faster will the road become and the more dangerous in consequence. I have personally made exhaustive studies in the design of main highways and I am more than convinced that the only safe and ultimately economical section for the trunk highway entering a town is (so far as is practical) two carriage-ways of from 20 feet to 30 feet in width with a centre grass strip sufficient in width for tree planting, a cycle track, and, if required, wide enough for trams as well. The electric tram has been widely condemned because of its incompatibility with other vehicular traffic on an all too narrow single carriage-way; but it should always be remembered that it is not the tram that is wrong, but the road.

MAIN-ROADSIDE DEVELOPMENT

Thousands of acres of land are being laid out about our great cities today with houses abutting on fast traffic arteries with absolutely no appreciation of the needs of through traffic. The same is true of development on many of our by-pass roads. I do not want to flog a recently coigned expression, but I feel that there is very real truth in the suggestion that if we accept the principle of by-passing, it will not be long before we shall need to "by-pass the by-passes."

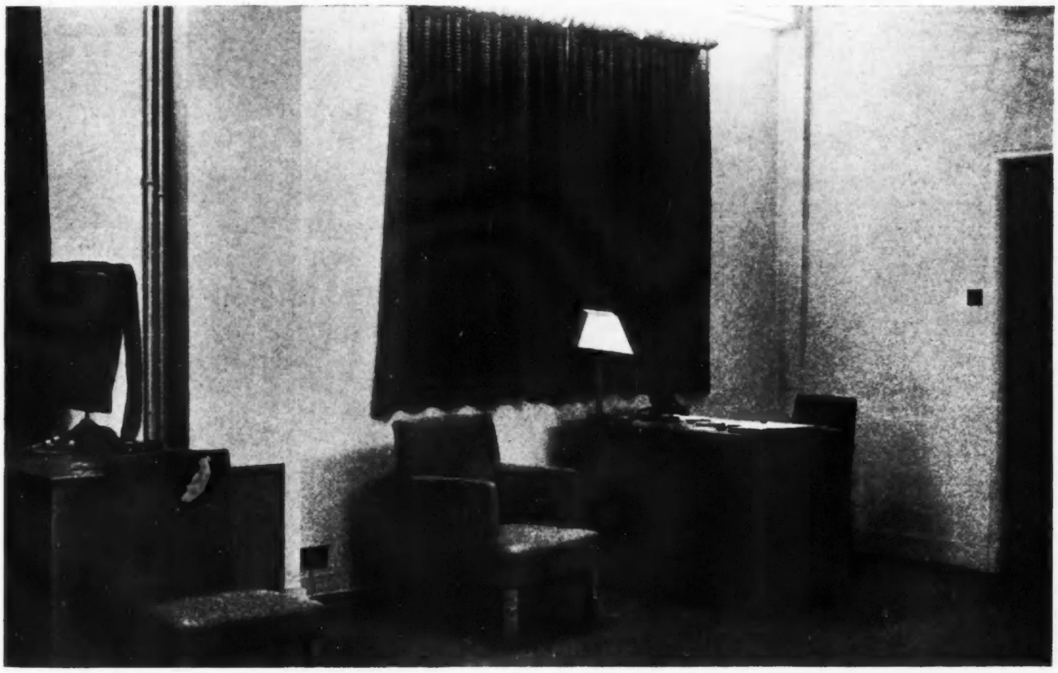
We must also not lose sight of the needs of main roadside and residential development. Even with all the elaborate machinery set up under the Town and Country Planning Act of 1932, ribbon development will be continued unchecked along large sections of trunk road approaches to heavily developed areas. What must, however, be done is to control this roadside development. It must not be allowed just to sit down by the wayside without making the necessary provision for its own needs. The principle of service roads running parallel to the main duplicated carriage-way but removed therefrom by a strip of greensward must be accepted as an encumbrance to the development of land where such land derives otherwise free road frontage from a public highway. A small tradesman's cart standing on either side of a 40 feet main carriage-way, or on each duplicated 20 feet carriage-way, is sufficient to wreck the efficiency of any highway; besides increasing the danger factor to an incredible extent. On one of our newest trunk road by-passes, before it is even yet completed, the authorities are complacently allowing the erection of rabbit-hutch dwellings right on the new highway, with no provision at all for the traffic needs of that development in relation to the needs of through traffic. The Town and Country Planning Act says that an authority may control the position and number of new streets entering on a main carriage-way, but not even that is being done in the case I have in mind.

PROGRESS NEEDS PLANNING

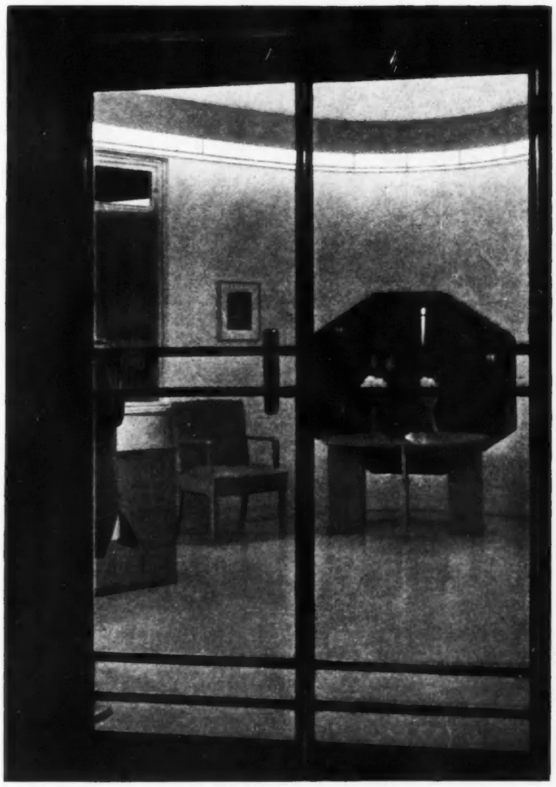
Until we get a National Planning Board to which all constructional Departmental policies and schemes must be submitted for co-relation and approval, we shall not be able to solve our road planning problems even if we *can* diagnose the trouble, and know what the remedy is, and how to apply it.

I would appeal, meanwhile, for a more enlightened policy of lay-out wherever new development is allowed on virgin soil on the outskirts of large towns and cities. The width of main through traffic streets should not be less than 120 feet between fences, or 180 to 200 feet when a tram track must also be provided, and in all cases at least a 16 feet service road should be provided for development on each side, together with duplicate main carriage-ways and cycle track as previously outlined.

SHOWROOMS IN MAYFAIR



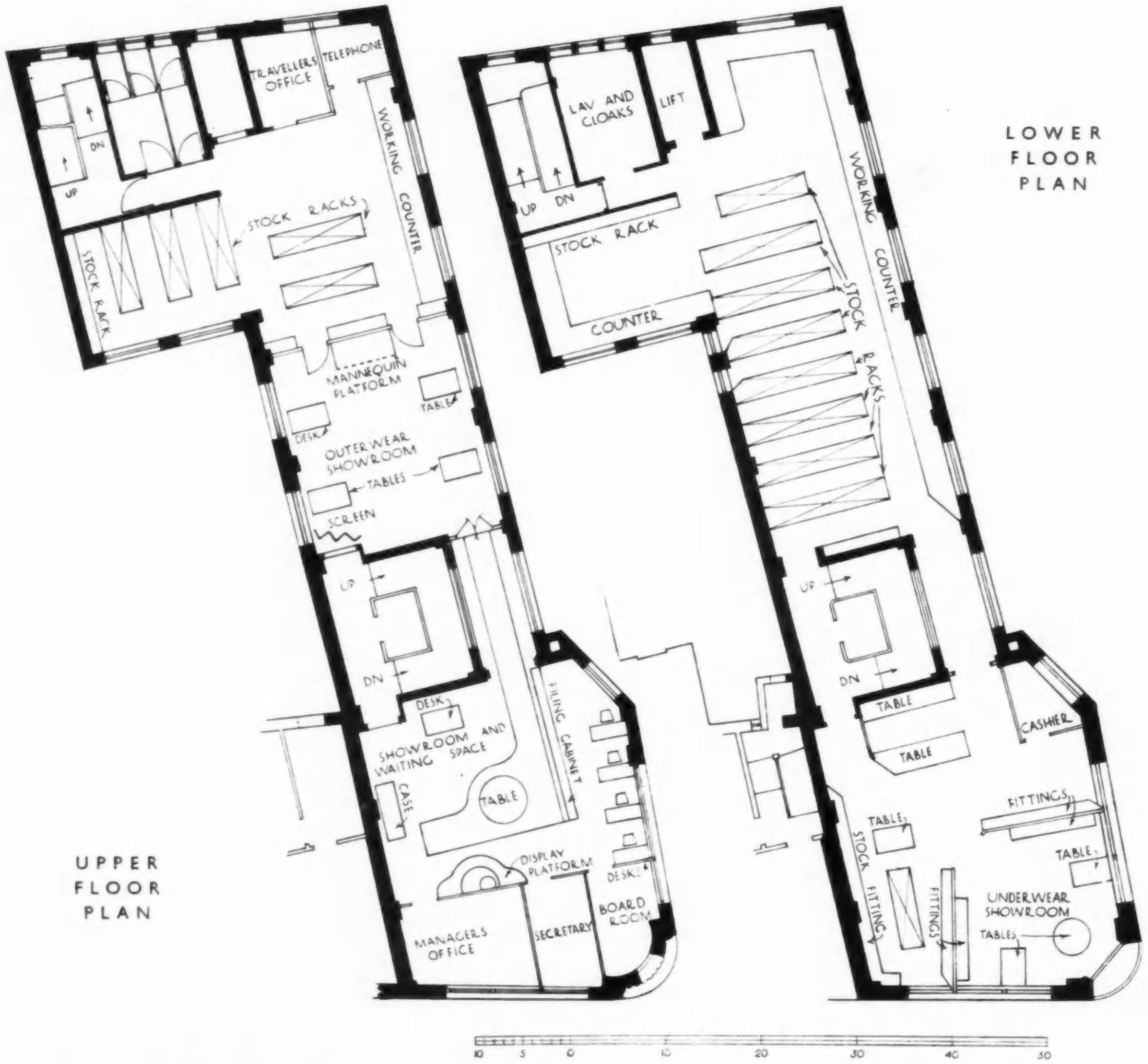
These showrooms, for Messrs. John Smedley, Ltd., were designed to provide storage and display facilities on two floors of an existing building. As the work (apart from certain furniture) had to be finished within five weeks from the date of commission, no material requiring any length of time for " drying-out " could be used. Partitions are of studs finished with wallboard or oak-faced ply. The ceilings and plastered (existing) walls of the showrooms are finished with plastic paint in broken white, as a background to goods of all colours.



The two photographs on this page show : above, the outer-wear showroom on the upper floor, with furniture designed by the architect ; right, looking through the door into the lower floor showroom.

DESIGNED BY FREDERICK ETCHELLS

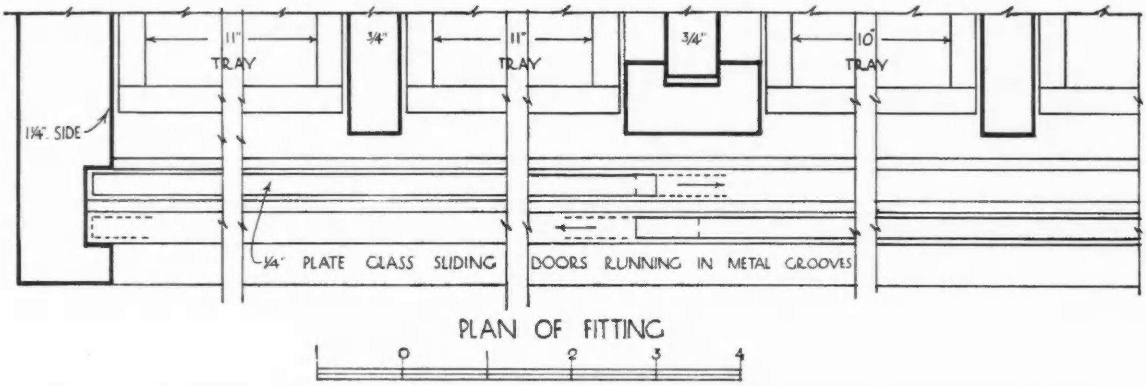
SHOWROOMS IN MAYFAIR:

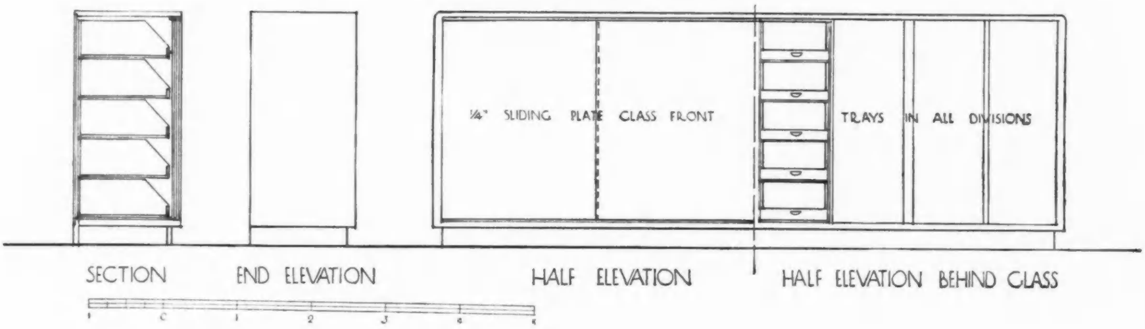

TRAVELLERS' OFFICE
TELEPHONE
WORKING COUNTER
UP
DN
STOCK RACKS
STOCK RACK
MANNEQUIN PLATFORM
TABLE
DESK
OUTERWEAR SHOWROOM
TABLES
SCREEN
UP
DN
DESK
SHOWROOM AND WAITING SPACE
CASE
TABLE
FILING CABINET
DISPLAY PLATFORM
DESKS
BOARD ROOM
SECRETARY
MANAGERS OFFICE
UPPER FLOOR PLAN
LAV AND CLOAKS
LIFT
UP
DN
STOCK RACK
COUNTER
WORKING COUNTER
STOCK RACKS
LOWER FLOOR PLAN
UP
DN
TABLE
TABLE
CASHIER
FITTINGS
TABLE
TABLE
STOCK FITTING
FITTINGS
UNDERWEAR SHOWROOM
TABLES
10
5
0
10
20
30
40
50

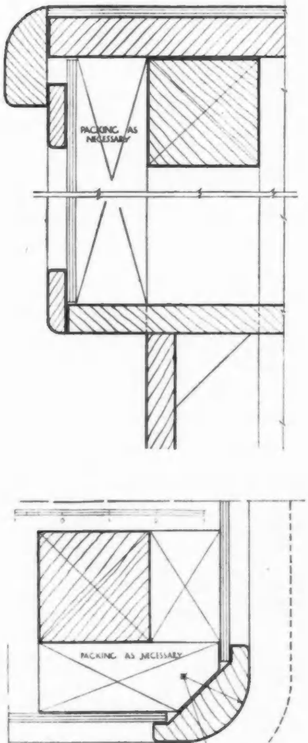
The two floor plans of the showrooms and, on the facing page, some details of various fittings.

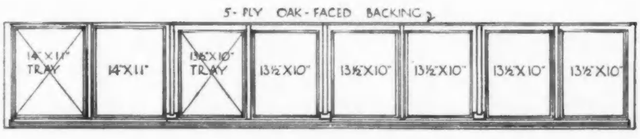
The merchandise, consisting of woollen and silk goods, demanded smooth, unbroken surfaces, particularly in storage racks, packing counters and display tables. The storage racks were therefore made in unpainted deal, certain portions being finished with a white-wax polish. The tops of the packing counters were finished with polished birch-ply. The display cases, desks, tables and chairs are of Austrian oak, white-waxed.

DESIGNED BY FREDERICK ETCHELLS

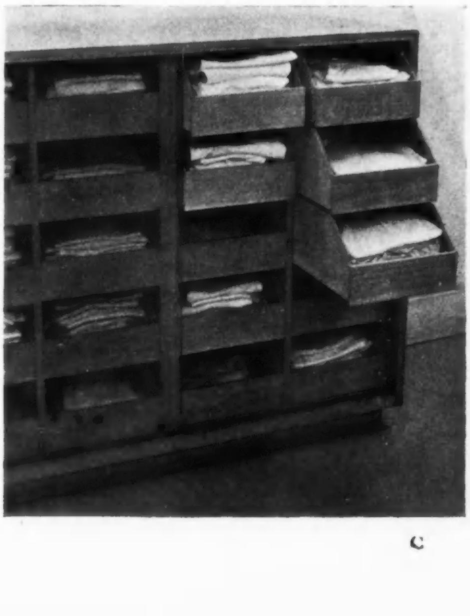

11" TRAY
3/4"
11" TRAY
3/4"
10" TRAY
1¼" SIDE
¼" PLATE GLASS SLIDING DOORS RUNNING IN METAL GROOVES
PLAN OF FITTING
1 0 1 2 3 4


¼" SLIDING PLATE GLASS FRONT
TRAYS IN ALL DIVISIONS
SECTION
END ELEVATION
HALF ELEVATION
HALF ELEVATION BEHIND GLASS

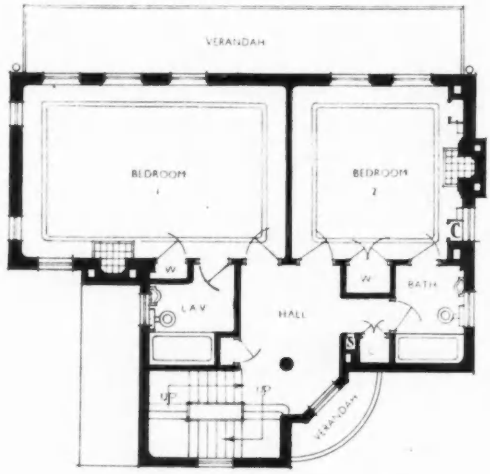

PACKING AS NECESSARY
PACKING AS NECESSARY
DETAIL OF COUNTER FITTING


5-PLY OAK-FACED BACKING
14"X11" TRAY
14"X11"
13½"X10" TRAY
13½"X10"
13½"X10"
13½"X10"
13½"X10"
13½"X10"
PLAN BELOW TOP

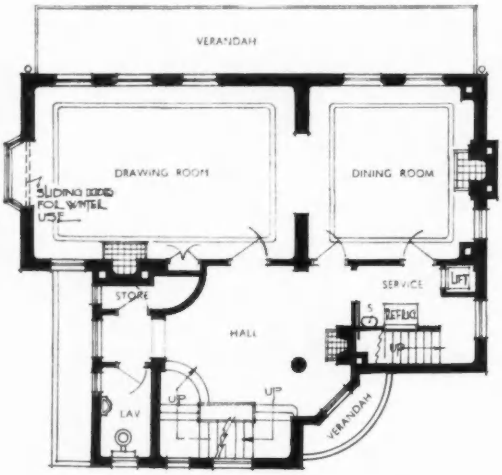
Above: Details of a showroom fitting, in oak, with sliding trays and glass front. Right: A photograph of the same fitting. Left: Detail section and plan of counter. The rounded arrises are specially designed to prevent tearing of delicate stuffs.



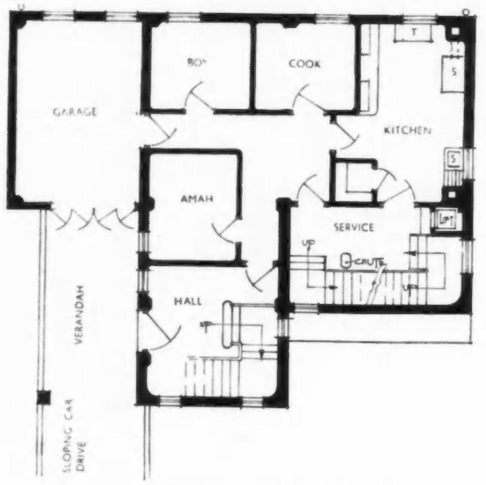
HOUSE AT HANKOW, CHINA:


VERANDAH
BEDROOM 1
BEDROOM 2
W
LAV
HALL
W
BATH
C
S
UP
UP
VERANDAH

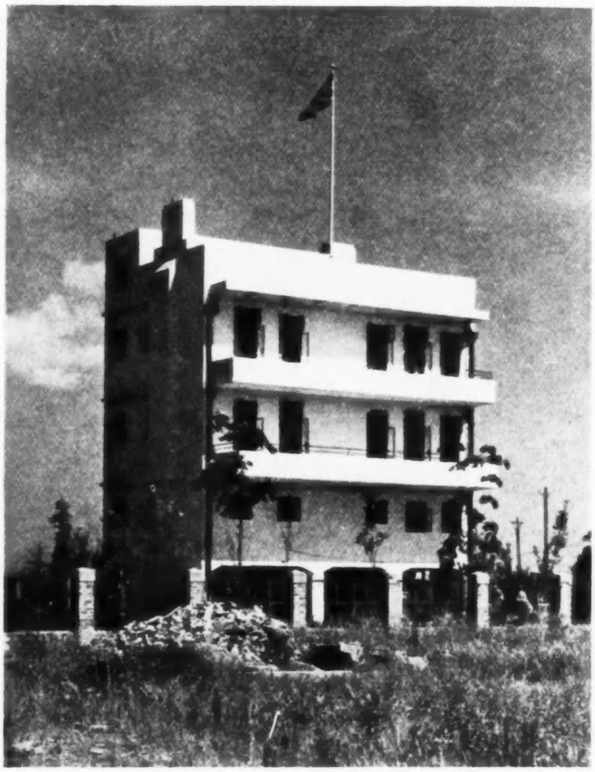
THIRD FLOOR PLAN


VERANDAH
DRAWING ROOM
SLIDING DOORS FOR WINTER USE
DINING ROOM
STORE
HALL
SERVICE
LIFT
S
UP
UP
UP
LAV
VERANDAH

SECOND FLOOR PLAN

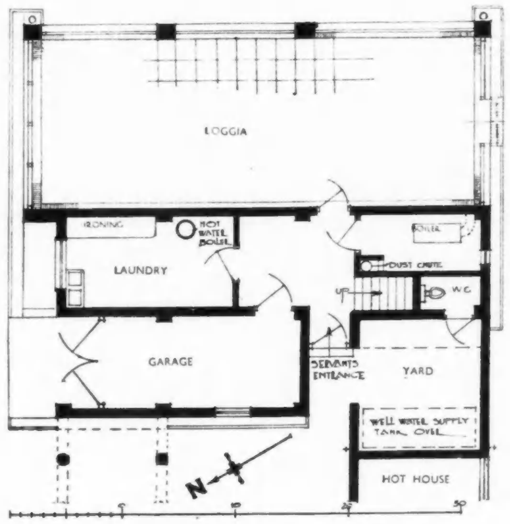

BOY
COOK
T
S
GARAGE
KITCHEN
S
AMAH
SERVICE
LIFT
UP
CHUTE
HALL
UP
VERANDAH
SLOPING CAR DRIVE

FIRST FLOOR PLAN



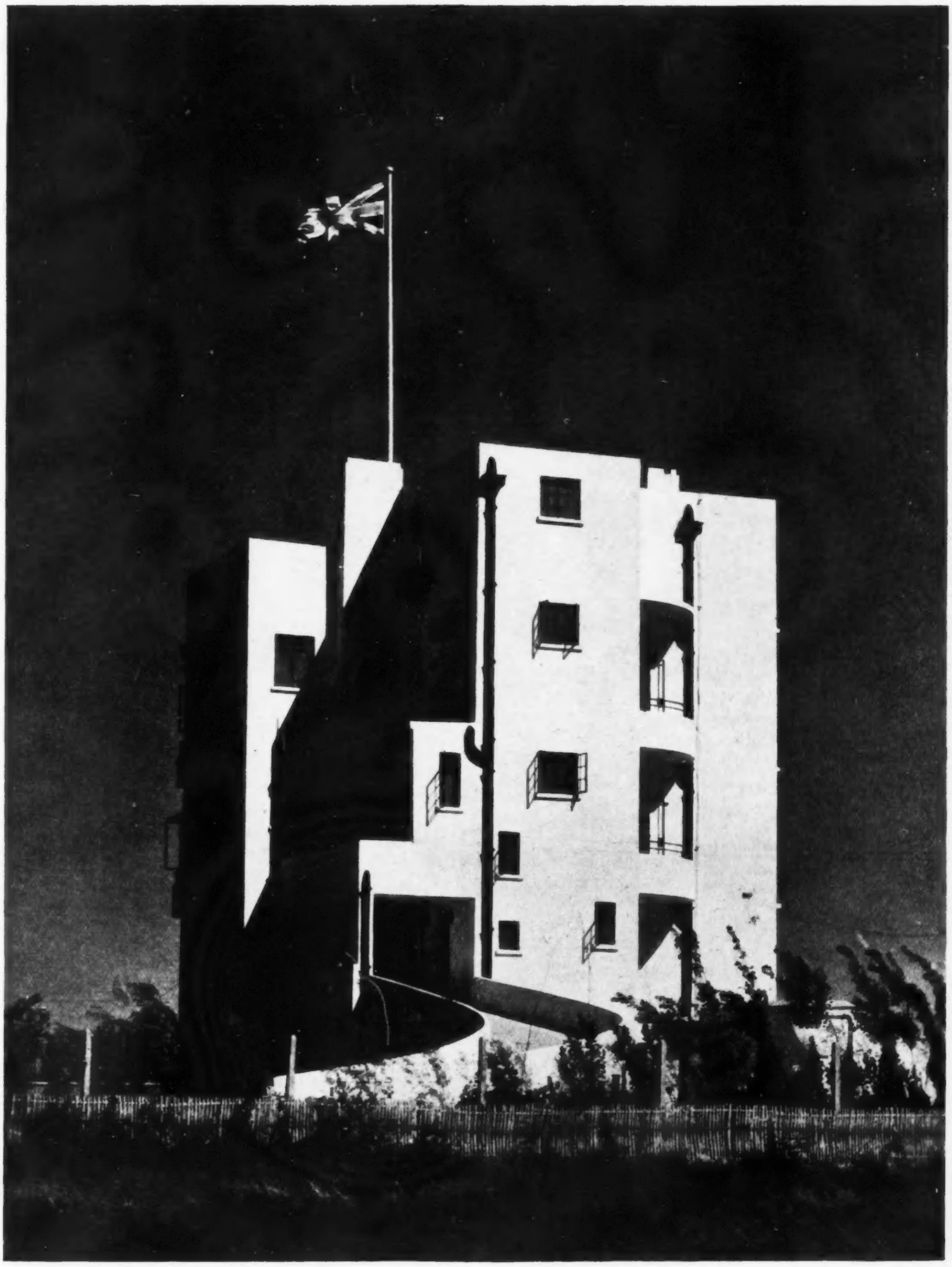
The floors and flat roof are of ribbed slab and hollow tile construction, with oak batten floors above flood level and cement floors below flood level. The roof is earth filled with grass finish, and is used for sleeping outside during the very hot summers.

Interior architraves are executed in hard cement, oil painted. All doors are of framed Oregon pine with a large 5-ply panel each side. The rooms are centrally heated from a boiler on the ground floor, while the hot service water boiler is placed in the laundry for drying purposes. A dust chute serves each floor and discharges into the boiler room where the refuse is burnt.


LOGGIA
IRONING
HOT WATER BOILER
BOILER
LAUNDRY
DUST CHUTE
UP
W.C.
GARAGE
SERVANTS ENTRANCE
YARD
WELL WATER SUPPLY TANK OVER
HOT HOUSE
N
50

GROUND FLOOR PLAN

DESIGNED BY C. O. HOOPER



This house was built just after the great flood of 1931 when the dykes protecting the site, which is 20 feet below highest Yangtze River level, gave way, the whole of the countryside being flooded to this depth. The flood caused enormous damage to buildings of ordinary construction, and this building was therefore especially designed to resist future floods. For safety the living rooms were placed above highest flood level, and to give maximum resistance to wave action a reinforced concrete framed structure was used, the column bases being well tied together.

The exterior panels are cavity walls finished outside with waterproofed white cement, " brush " finished. All windows are steel casements with rustless detachable mosquito frames on the inside.

LITERATURE

STEELWORK

[*By W. E. J. Budgen*]

The Use of Steelwork in Buildings under the L.C.C. Code of Practice. By Donovan H. Lee London : Spon, Ltd. Price 4s. 6d. net

THE author and publishers are to be congratulated on being the first in the field with a book dealing directly with the design of steel frame buildings in accordance with the requirements of the *L.C.C. Code of Practice and British Standard Specification No. 449 (Use of Structural Steel in Building)*.

The arrangement of the main body of the book, consisting, as it does, of the clauses of the Code of Practice on the left-hand page, and the author's comments on these clauses directly opposite on the right-hand page, is also an excellent idea, and is spoilt only by the fact that the explanatory diagrams and graphs have in many cases been printed to too small a scale to be really useful.

Mr. E. S. Andrews contributes a foreword in which he brings out the interesting point that although the L.C.C. Code of Practice contains rules for the construction of hollow walls, the L.C.C. are now advised " that the Council has no power to permit hollow walls coming within the Code, because their powers do not enable them to depart from the rules in the Second Schedule of the London Building Act of 1930."

The first chapter gives the history of the Code and notes on its scope and the districts in which it applies. The main body of the book then follows, consisting, as has already been mentioned, of the complete clause of the Code on the left-hand page and the author's comments on the right-hand page.

It is not possible to agree completely with the comments in all cases. For example, in his diagram on page 69, illustrating clauses dealing with wind pressure on buildings, the author, by adding the words : " with cross walls " to one diagram and " without cross walls " to the other, seems to have misread the clauses ; since he suggests that wind stresses may only be ignored in a building in which the height is less than twice the width, if the building is stiffened by cross walls ; whereas the clause says it may be neglected if the building is stiffened by floors and *or* cross walls—an important difference. He also suggests that wind stresses need only be taken into account in a building where the height is greater than twice the width, if there are no cross walls ; whereas the Code says that these stresses must be investigated whether the building has cross walls or not.

Engineers also will surely not agree that the " greatest point of controversy over the question of stresses in stanchions subjected to bending has been which radius of gyration to take."

In other cases, however, very useful additional information is given—for example, a table of crushing strengths of various types of brick showing into which strength class of the Code they go. Suggested ratios are also given of effective length to actual length of stanchions which, the author states, " are generally accepted by London district surveyors."

The book concludes with a comparison of the Code of Practice with British Standard Specification No. 449 for the Use of Structural Steel in Building, from which it will be seen that these two documents are almost identical ; and an abridged list is given of towns in the British Isles which have adopted this specification as a standard for steel construction.

For the sake of future editions, the author might note that the explanation to clause 4 on page 15, and the first note on page 112, seem to have crept in by mistake, while the note to clause 45 is apparently misprinted so as to be unintelligible. He might also use the correct spelling of the word riveted as given in the official copy of the Code.

KELLY'S DIRECTORY

Kelly's Directory of the Building Trades, 1933. London : Kelly's Directories, Ltd. Price 50s. net.

THIS, the nineteenth edition of *Kelly's Directory*, covers England, Scotland and Wales, and constitutes an invaluable guide to the building and allied trades. In addition to the names of upwards of 20,000 builders, it gives also the names of those engaged in the various allied professions and trades.

The book comprises : (1) A places section, which gives the names for each county, arranged alphabetically under the towns and villages, also such details as population, early closing and market days. (2) A trades classification for the London postal district, with the names (and addresses) arranged alphabetically under each trade. (3) A similar trades classification for the rest of England, Scotland and Wales, with the names (and addresses) arranged alphabetically under each trade.

There is also an extensive section giving in alphabetical order a list of branded articles and specialities used in the building trades, together with the names and addresses of the manufacturers.

Literature Received

Lombardic Architecture. Two volumes. By G. T. Rivoira. Oxford : Clarendon Press. Price 105s. net.

Carpenters' Tool Chest. By T. Hibben. London : Routledge. Price 5s. net.

Mathematics for Students of Building. Book II. By F. E. Drury, M.SC.TECH., M.I.STRUCT.E., and W. T. Haslam, B.SC. London : Edward Arnold & Co. Price 5s. net.

Two Thousand Years of London. By Whitaker Wilson. London : Methuen & Co. Price 12s. 6d. net.

Literary Ghosts of London. By E. Beresford Chancellor. London : Richards Press. Price 12s. 6d net.

Sir Ebenezer Howard and the Town Planning Movement. By Dugald Mcfadyen. Manchester : University Press. Price 10s. 6d. net.

English Water-Colours. By Laurence Binyon. London : A. and G. Black. Price 7s. 6d. net.

Laurence Weaver. By Clough Williams-Ellis, F.R.I.B.A. London : Bles. Price 6s. net.

China Architects' and Builders' Compendium. Edited by J. T. W. Brooke, A.R.I.B.A. Shanghai : North China Daily News and Herald, Ltd. Price 10s. net.

LAW REPORTS

QUESTION AS TO TRIAL AND ACTION

Mount v. Evered.—Chancery Division. Before Mr. Justice Bennett.

THIS was an application by the defendant, Mr. Charles R. Evered, to refer the trial of this action to an Official Referee.

Mr. Wallington, for the defendant, said the grounds for the application were that a great deal of time and expense would be saved if the whole matter went to a Referee.

The action, counsel continued, was brought for damages for alleged negligence by his client, as architect, in dealing with the reconstruction of certain buildings in Kensington. The inquiry as to whether there had been negligence must be a lengthy and detailed one, involving a large number of particulars of matters dealing with different operations on the buildings before the question of liability or the extent of the liability, if any, could be taken into account. The advantage of a Referee would be that at one and the same time he could determine whether there had been negligence, and if there was damage, how much. All that a Judge would decide would be the question of negligence, and then if negligence were found, there would have to be a reference as to damages, which would involve the whole matter being gone into over again. He submitted that it would be wrong to put the parties to the risk of two trials, if one would do.

Mr. Russell Gilbert, for the plaintiff, said he wanted the question of negligence decided by a Judge. His complaint was divided into two branches. He said that the defendant put upon the joists a greater weight than they could bear and that he constructed the cornices of the wrong material—plaster instead of wood. Defendant had since put everything right, but he still disputed his liability, so that there was a serious question under his contract to be determined.

His lordship held that Mr. Mount was entitled to have his case decided by a Judge, and he therefore made no order on the defendant's application.

ARCHITECT'S CLAIM FOR FEES

Beard v. Bruce.—King's Bench Division Before Mr. Justice Goddard.

THIS was an action by Mr. Stanley John Beard, F.R.I.B.A., of the firm of Beard and Clare, architects, of Baker Street, London, against Mr. W. A. Bruce, of Park Road, New Barnet, to recover the sum of £143 for professional services rendered for the proposed erection of a cinema and lock-up shops at Cathill Road and Brookhill Road, New Barnet. The claim of the plaintiff included the plaintiff's services in obtaining the provisional approval of the Herts County Council to the proposed erection of the cinema.

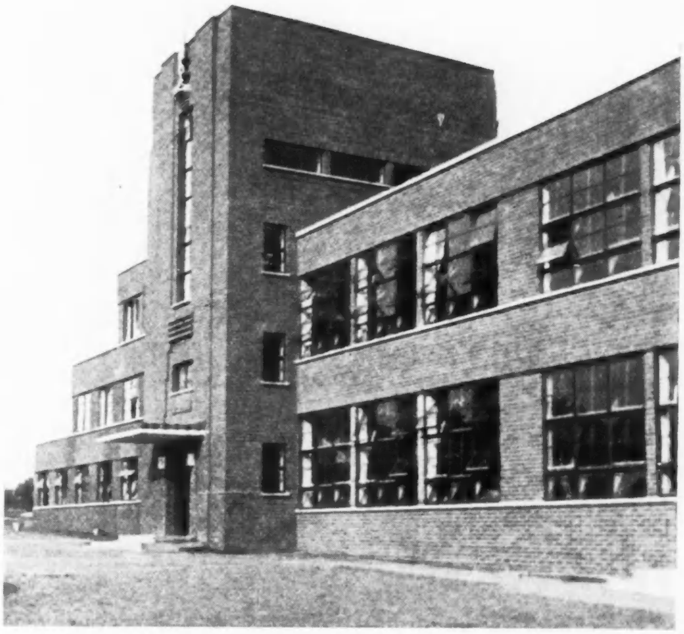
The defence was that it was intended that the plaintiff should prepare complete plans, and, as he had only supplied rough sketch plans, they repudiated his claim.

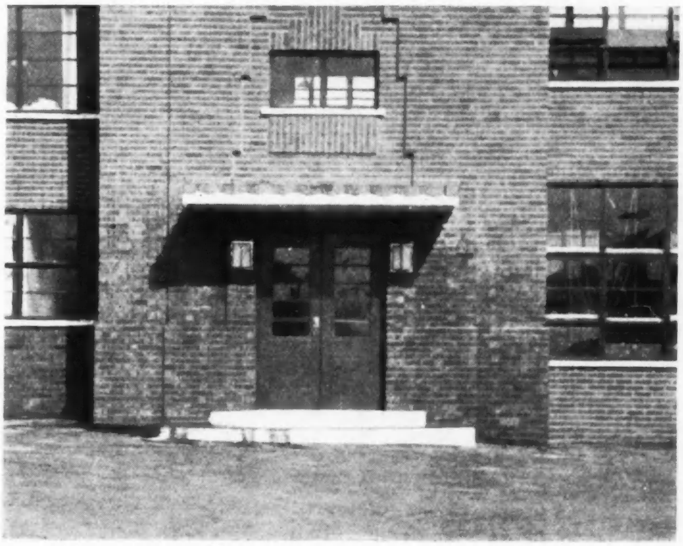
Plaintiff's case was that he only contracted to prepare preliminary plans. He was an architect of many years' experience and had built some 50 cinemas. Defendant had some land at New Barnet which he wished to develop and erect a cinema upon. If plaintiff had been instructed to prepare plans for the cinema costing £10,000, his full charges would have been £400. Instead of that, plaintiff said the agreement with the defendant was that he was only to prepare rough sketch plans and obtain the provisional consent of the County Council to the erection on the proposed site of the cinema. Plaintiff agreed to charge 120 guineas for these plans. The site was a difficult one. No complaint was made as to the claim until five months after the account had been sent in.

Plaintiff gave evidence in support of his case, and declared that he had built more cinemas than any other architect in the country. He generally received 200 guineas for such rough sketch plans, but he had only charged the defendant 120 guineas.

After hearing the evidence, his lordship said he came to the conclusion that the contract was not to prepare complete plans, but merely such plans as were necessary to obtain the approval of the County Council, and therefore the plaintiff did what he was directed to do and prepared rough sketch plans. He gave judgment for the plaintiff for £132 12s. 6d.

SCHOOL AT WEMBLEY





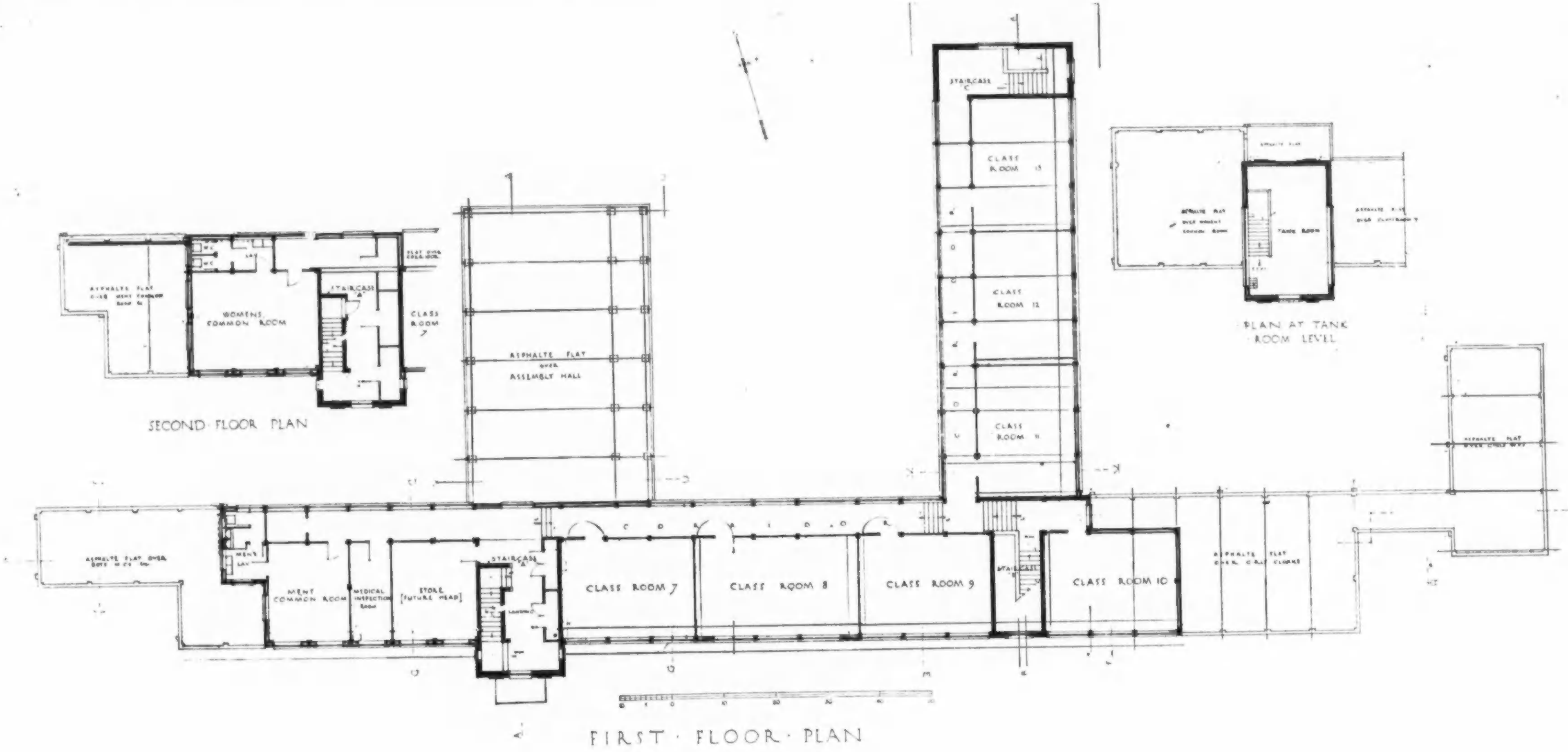
This school, designed by the Middlesex County architect, is built on a site of about 7 acres near Oakington Manor Drive, and has been erected to meet the need for further accommodation for Junior and Infant children in the rapidly growing area on the Stonebridge Park side of Wembley.

Provision is made for 290 Infants and 338 Junior Mixed Scholars.

The school was the first to be carried out for the Middlesex Education Committee subsequent to the financial crisis, and its architectural character is the direct result of the need for economy.

BY W. T. CURTIS

SCHOOL AT WEMBLEY, MIDDLESEX

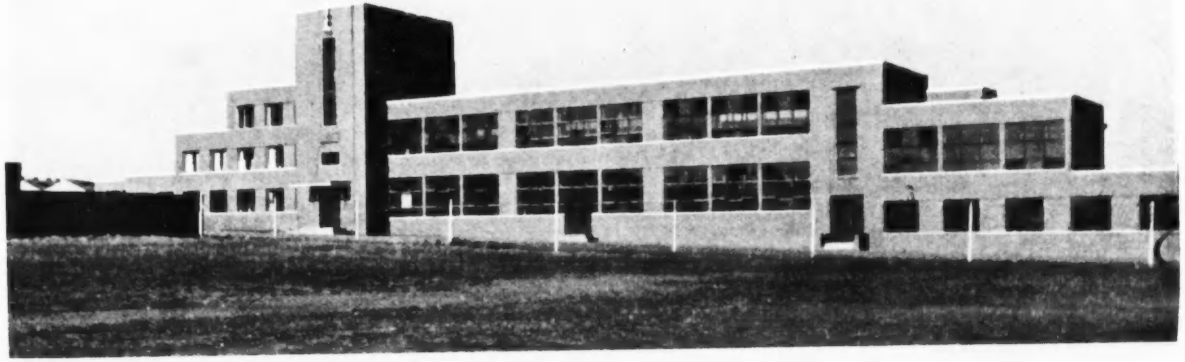

ASPHALTE FLAT OVER MENS COMMON ROOM
W.C.
W.C.
LAV.
WOMENS COMMON ROOM
STAIRCASE "A"
FLAT OVER CORRIDOR
CLASS ROOM 7
SECOND FLOOR PLAN
ASPHALTE FLAT OVER ASSEMBLY HALL
STAIRCASE "C"
CLASS ROOM 13
CLASS ROOM 12
CLASS ROOM 11
ASPHALTE FLAT OVER WOMENS COMMON ROOM
TANK ROOM
ASPHALTE FLAT OVER CLASSROOM 7
PLAN AT TANK ROOM LEVEL
ASPHALTE FLAT OVER BOYS W.C.S &c.
MENS LAV.
MENS COMMON ROOM
MEDICAL INSPECTION ROOM
STORE [FUTURE HEAD]
STAIRCASE "A"
LANDING
CORRIDOR
CLASS ROOM 7
CLASS ROOM 8
CLASS ROOM 9
STAIRCASE
CLASS ROOM 10
ASPHALTE FLAT OVER CLOAKS
ASPHALTE FLAT
FIRST · FLOOR · PLAN

DESIGNED

BY

W. T. CURTIS

(Middlesex
County Architect)

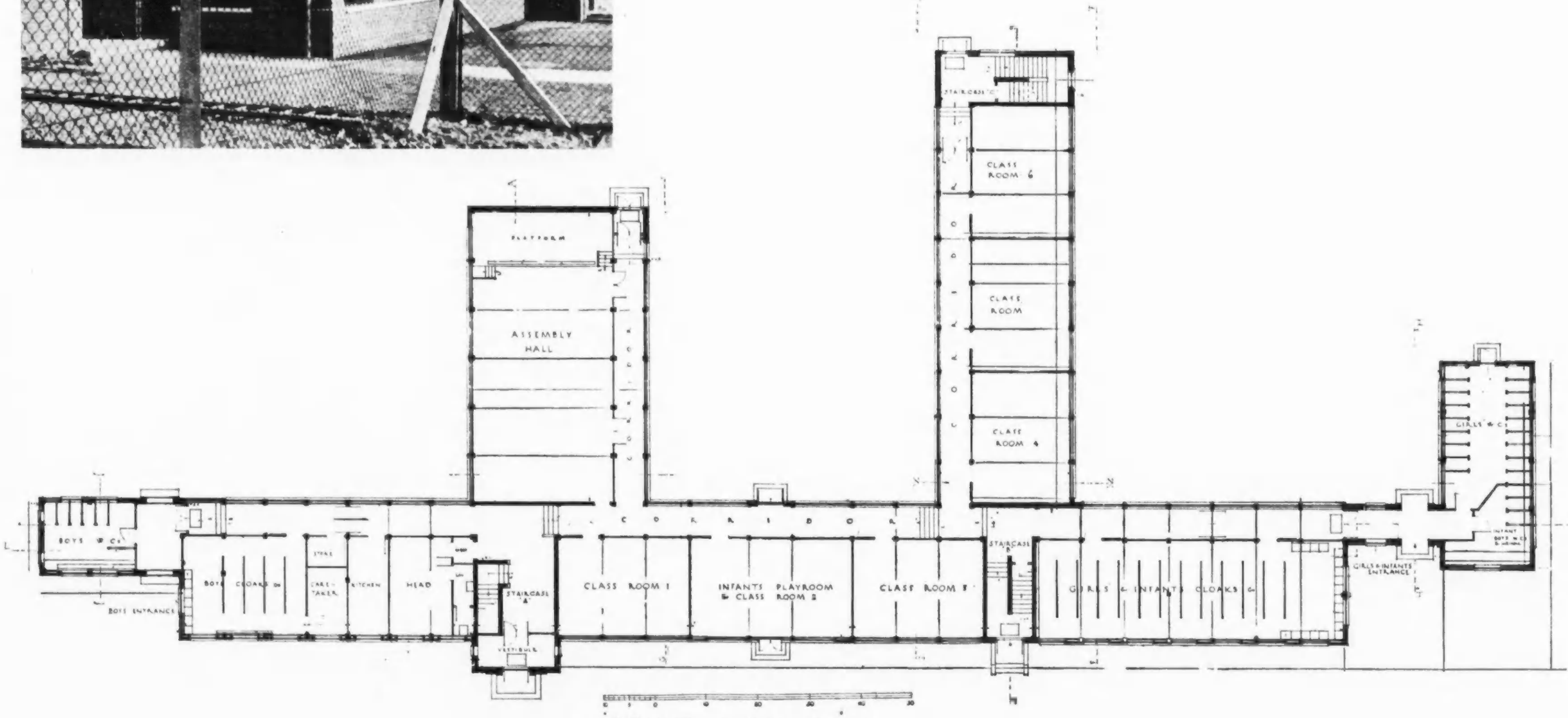


The structure consists of a steel skeleton with reinforced concrete floors and flat roofs, with cavity brick walls as an external finish.

Internally the staff rooms are plastered, while the classroom walls are left fair face brickwork on the external walls and the partition walls are single brick up to dado height and studding covered with wallboard above. British Columbia pine, stained, is used for the woodwork throughout. The cloakrooms and corridors are floored with coloured asphalt, and composition flooring blocks are used for the classrooms, staff rooms and assembly hall. Each classroom has a range of cupboards under the blackboard, which extends the whole width of the room.

In this school both heating and lighting are by electricity, the heating of the classrooms and assembly hall being accomplished by means of panel radiators fixed to walls and stanchions, and additional heating is supplied to the assembly hall by a suspended type of radiator. The whole installation is under thermostatic control, with individual thermostats in each room, and a special temperature-sensitive switch is fitted which will automatically regulate the time of switching on the current in the morning in accordance with variations in the outside temperature.

A caretaker's cottage is also provided on the site. The total cost, including the cottage, was approximately £17,500.


PLATFORM
ASSEMBLY HALL
CORRIDOR
STAIRCASE C
CLASS ROOM 6
CLASS ROOM
CLASS ROOM 4
BOYS W.C.s
BOYS ENTRANCE
BOYS CLOAKS &c
STORE
CARETAKER
KITCHEN
HEAD
STAIRCASE A
VESTIBULE
CLASS ROOM 1
INFANTS PLAYROOM & CLASS ROOM 2
CLASS ROOM 3
STAIRCASE B
GIRLS & INFANTS CLOAKS &c
GIRLS & INFANTS ENTRANCE
GIRLS W.C.s
INFANT BOYS W.C.s
N
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GROUND FLOOR PLAN

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may in the course of time indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems.—Crown Copyright Reserved.

Damp in a Basement Floor

¶ *DAMP was showing on the floor of a basement adjoining rooms used for cold storage purposes. The owners of the basement were of the opinion that the floor had been chilled by the neighbouring cold storage rooms and that this had led to the condensation of moisture on its surface. The basement was used for the storage of packing cases and mould showed in places on these cases. The opinion of the Station was sought as to whether the dampness experienced could be due to condensation.*

On inspecting the building, dampness was found on the basement floor in several places both near to, and at some distance away from, the walls of the cold storage rooms. No moisture was observed on the wall faces. These walls were of 18 inches of brickwork, to which a further 16 inches of cork had been fixed. Measurements showed that at no point was the difference between the air temperature and the temperature of the surface of floor or wall greater than 2° F. ; and this would not be sufficient to cause condensation. An examination of the floor revealed that it consisted of about 6 inches of concrete covered with asphalt. The concrete was of very poor quality and wherever the floor was cut open it was found to be saturated throughout its thickness. Further examination of the damp patches showed that in several of these the asphalt covering was defective.

It was therefore concluded that the dampness of the floor was caused by moisture rising through the permeable concrete and forming damp patches where the asphalt covering was no longer sound. It is possible that with free circulation of air over the floor area, the moisture rising through the concrete might have readily evaporated at the surface ; the presence of the cases, however, restricted air circulation and allowed damp patches to form.

Corrosion of Lead Flashing

¶ *A FIRM of architects submitted a sample of corroded lead flashing from a stone cornice. It was stated that the cornice, which was part of a stone portico over the front entrance of a building in London, had originally sloped to the front edge. When the leadwork was put on, the cornice was made up with cement and sand so that the leadwork then fell to a lead flat at the back of the cornice. In places the lead had been distorted and was lifting from the cemented stone. The work was apparently not very old.*

Examination of the specimen showed that the corrosion had proceeded from the underside of the lead where it was in contact with the cement mortar. The metal had been converted to red lead oxide, the change having penetrated in places almost through the whole thickness of the sheet.

The appearance of the material was typical of the corrosion of lead by cement mortar, a subject which is dealt with at length in two publications of the Building Research Station. (*The Corrosion of Lead in Buildings*, price 1s. net ; and *The Prevention of Corrosion of Lead in Buildings*, price 4d. net. H. M. Stationery Office.) Lead which is freely exposed to the weather develops a protective film which prevents injurious corrosion, but when it is placed in contact with cement mortar the formation of this film is prevented, and oxidation may be progressive until the metal is destroyed.

The corrosion of lead under such conditions is accompanied by expansion and this may well have been the cause of the lifting and buckling which drew attention in this case to the destruction of the metal by corrosion.

Failure of Plaster on Brickwork

¶ *A CONTRACTOR sought advice on a failure of plaster applied to brickwork. It was stated that a crystal formation had developed at the face of the brickwork and had apparently pushed the plaster away from the wall, leaving a gap of about half an inch.*

The sample of the crystalline deposit has been examined and found to consist mainly of magnesium sulphate, with crystals predominantly of the type associated with failures of this kind. A number of cases of failure such as this has been reported to the Station and an investigation of the problem has shown that if a lime plaster or plaster containing lime is applied to brickwork in which magnesium sulphate is present, the magnesium sulphate may crystallize at the interface of the brick and plaster and force the plaster from the wall. Frequently a surface layer of the brick is also removed.

In making good defective work of this kind it would be desirable to use a plaster which does not contain lime, as it is possible that there may still be sufficient magnesium sulphate in the bricks to cause a repetition of the failure. Portland cement rendering which liberates lime on setting would be unsuitable and it is suggested that a calcium sulphate plaster should be used. Before re-plastering all efflorescent salts should be brushed away and the wall washed down with clean water. It should be borne in mind that with brickwork containing a high content of soluble salts there is always some danger of subsequent efflorescence, but the likelihood of further displacement of the plaster will be minimized by using a calcium sulphate plaster and avoiding any addition of lime.

If the failure is not very extensive it would be desirable to cut out and replace the brickwork in view of the possibility of further troubles from efflorescence.

Failure of Wall Tiling Fixed to Breeze Block Partitions

¶ *A CONTRACTOR stated that he had experienced considerable difficulties with tiling fixed to breeze block walls. The tiles very frequently came away from the backing, though tiling fixed in exactly the same way to brick walls remained secure. He wished to know whether the Station had had similar experiences.*

Cases of failure of glazed wall tiling fixed to breeze and clinker concrete partitions are frequently reported to the Station.

The principal causes of such failures are probably to be found in movements of the breeze concrete combined with weak adhesion of the tiling. The properties of breeze and clinker concretes are discussed in Building Research Bulletin No. 5 (obtainable from H.M. Stationery Office, price 6d.) and it will be seen that the most significant factors to be taken into account are :—

(1) The possibility of unsoundness of the aggregate due to the presence of unburnt or partially unburnt coal. This may lead to overall expansion of the partition with consequent loosening of the tiles if the bond is weak.

(2) Excessive shrinkage of the blocks. The shrinkage on drying of all cement products is a well-known property, but even sound breeze and clinker concretes are liable to a considerably greater shrinkage than normal gravel concretes. As the shrinkage of a well-fired clay product, such as a glazed wall tile, is comparatively negligible, considerable differential stresses are set up between the tile and the backing while the work dries out. Unless the adhesion of the tile is extremely good, failure results.

Clay bricks again are subject to negligible shrinkage, so that where tiles are fixed to a brick wall such differential stresses are not set up and failure seldom occurs.

In order to prevent failure, therefore, it would be necessary (*a*) to avoid the use of unsound clinker ; (*b*) to minimize as far as possible the shrinkage of the breeze concrete ; (c) to secure a good bond for the tiling. Methods of testing the soundness of breeze and clinker aggregates are described in the bulletin referred to above. The reduction of the shrinkage of the backing is by far the most difficult problem. It is necessary to ensure that the blocks are well and carefully made and allowed to mature thoroughly before being laid, and the partition should be allowed to dry out as long as possible before fixing the tiles. Even in the most favourable circumstances, however, it is probably not possible entirely to eliminate shrinkage and where tiling is fixed to such a backing, it must be realized that some risk of failure exists. Experiments at this Station have shown that the adhesion of the tiling can be considerably improved by applying a cement slurry of cream consistence to the back of the tiles 24 hours before laying. The tiles should be soaked before applying the slurry.

[*The following query and answer was held over from our last issue.*—ED., *A.J.*]

Bonding Aluminous Cement Concrete to Portland Cement Concrete

¶ *IN a floor the topping, made with a high alumina cement, had failed to adhere to a Portland cement concrete base, and a firm of cement manufacturers put the following questions to the Station :*

(*1*) *Does concrete made with high alumina cement bond effectively to concrete made with Portland cement in the following cases :* (*a*) *for construction joints ?* (*b*) *for floor toppings ?* (*c*) *for renderings ?*

(*2*) *Could a thin layer of high alumina cement concrete* (*say 1 in. to 3 ins. thick*) *be placed effectively on a base of* (*a*) *Portland cement concrete ?* (*b*) *high alumina cement concrete ?*

It should be mentioned at the outset that most of the work on bonding new concrete to old which has been carried out at the Building Research Station has so far been confined to the problem of producing good construction joints. This has been fully described in Building Research Special Report No. 16, *Construction Joints in Concrete. Bonding New Concrete to Old* (H.M. Stationery Office, price 2s. net). Some slight reference is made in that report to bonding in concrete floor construction.

Dealing with the queries in rotation :—

1. (*a*) It is the experience of the Station, and also of some other investigators, that it is possible to bond high alumina cement concrete effectively to concrete made with Portland cement, provided that the Portland cement concrete is well matured (see p. 50 of the report cited above). There is little or no hope of bonding high alumina cement concrete to Portland cement concrete that is immature.

The tests carried out here showed that high alumina cement concrete which had been bonded to Portland cement concrete two months' old adhered excellently up to one year after bonding ; tests at longer ages were not made.

1. (*b*) and (*c*) The question of rendering Portland cement concrete with high alumina cement mixes for floor toppings and external stucco is a difficult one, and, as has already been said, the experience of this Station is somewhat limited in this respect. A tendency has, however, been noted for high alumina cement mortar to lift when laid on a Portland cement concrete base ; possibly the rapid rate of shrinkage experienced with high alumina cement during the early stages of maturing may account for some of this trouble.

2. (*a*) The question whether a thin layer of high alumina cement concrete, as in a floor topping, can be placed on Portland cement concrete is answered by the comments on queries 1 (*b*) and (*c*).

With regard to query 2 (*b*) about the efficacy of an application of high alumina cement concrete to high alumina cement concrete, it is the opinion of the Station that, by careful workmanship it is possible to carry this out with good results. The best results would doubtless be obtained by following a technique similar to that suggested in the American Standard Specification for Concrete Floors (*Proc. Amer. Conc. Inst.*, 1921, *17*, 258–66) from which the following paragraph is quoted :—

"*Clause 55.*—The wearing course shall be placed immediately after mixing. It shall be deposited on the fresh concrete of the base before the latter has appreciably hardened, and brought to the established grade with a strike board. In no case shall more than 45 minutes elapse between the time the concrete for the base is mixed and the wearing course is placed."

To sum up, it cannot be said that it is impossible to lay thin layers of high alumina cement concrete or mortar, either as floor finishes or as renderings, but it is difficult. In all cases the high alumina cement rendering should be kept *thoroughly* wet for at least 24 hours after placing.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Widening of Princes Street

MR. HOWARD asked the Minister of Transport what communications had passed between his department and the City Corporation relative to the widening of

SCHOOL PRINCIPALS

• I •

LIONEL B. BUDDEN

LIVERPOOL SCHOOL OF ARCHITECTURE

BORN in 1887, Professor Lionel B. Budden was educated at the Merchant Taylors' School, Crosby, and the University of Liverpool. He received his architectural training at the School of Architecture, Liverpool University (where he was awarded the Holt Travelling Scholarship and the University Scholarship in Architecture) ; the British School at Athens ; and in Berlin. He graduated B.A. with First Class Honours in Architecture, in 1909 ; and received his M.A. degree in the following year.

He was appointed assistant lecturer at the School of Architecture, Liverpool, in 1911. In 1913 he qualified as an Associate of the R.I.B.A., and became a Fellow in 1929. Professor Budden was appointed to take charge of the Liverpool School during 1915-1919, in the absence of the Professor of Architecture. His other appointments included the following : member of the Board of Architectural Education and the Council of the R.I.B.A. ; chief examiner in Art, Northern Universities ; external examiner to the Welsh School of Architecture, etc.

Professor Budden has been successful in the following architectural competitions : Birkenhead War Memorial (1923) ; King's College, Cambridge : New Library, Undergraduates' Chambers and Provost's House (in collaboration with Mr. H. J. Rowse), 1923 ; Memorial Tower, Blackpool (1926) ; Liverpool Cenotaph (1926). He was also responsible for the design of the new School of Architecture, Liverpool (in collaboration with Prof. C. H. Reilly and Mr. J. E. Marshall). He was appointed Roscoe Professor of Architecture, Liverpool, early this year.

Princes Street during the rebuilding of the Bank of England; what had been the result; and whether there was any prospect of the Princes Street frontage being set back at least 6 feet.

Mr. Stanley replied that the possibility of securing the widening of Princes Street was discussed between his department and the City Corporation some years ago, but having regard to the cost involved the authorities concerned were unable to proceed with the scheme. The discussions led to agreement as to the widening at the corner of Mansion House Street and Princes Street, which had been completed. In addition, the Bank of England had agreed to construct a footpath at the back of the Temple at the Lothbury-Princes Street corner. He did not think there was any prospect of the Princes Street frontage being set back for many years, having regard to the building work already completed.

Housing Progress

Sir Francis Fremantle asked the Minister of Health if he would state the number of houses erected, respectively, with and without public financial assistance during the year ended September 30, 1933; the corresponding numbers for 1932; and the average cost of such houses of four-roomed non-parlour type.

Sir Hilton Young said that 50,433 houses were provided with State assistance and 167,880 without State assistance in England and Wales during the year ended September 30, 1933, making a total of 218,313. The corresponding numbers for the year ended September 30, 1932, were 69,090 and 132,886 respectively, making a total of 201,976. (These numbers excluded houses of a rateable value exceeding £78; £105 in the Metropolitan area.) The average cost of 4-roomed houses could not be separately stated, but the average cost of all non-parlour houses in contracts let by local authorities (other than the London County Council) or in approved direct labour schemes in England and Wales during the year ended September 30, 1933, was £292. The corresponding figure for the year ended September 30, 1932, was £312. These average costs included the cost of paths, drains and fences, but excluded the cost of land, roads, sewers and architects' fees.

	During the year ended September 30, 1933.			Since the war up to the September 30, 1933.		
	By Local Authorities.	By Private Enterprise.	Total.	By Local Authorities.	By Private Enterprise.	Total.
With State Assistance under the						
Housing, Town Planning, etc., Act, 1919 ..	—	—	—	170,090	4,545	174,635
Housing (Additional Powers Act, 1919 ..	—	—	—	—	39,186	39,186
Housing, etc, Act, 1923 ..	—	—	—	75,309	362,738	438,047
Housing (Financial Provisions Act, 1924 ..	41,741	2,390	44,131	469,704	13,380	483,084
Housing Act, 1930 ..	6,236	66	6,302	11,796	72	11,868
Totals State Assisted	47,977	2,456	50,433	726,899	419,921	1,146,820
*Without State Assistance** ..	1,236	166,644	167,880	9,376	1,018,899	1,028,275
Grand Totals ..	49,213	169,100	218,313	736,275	1,438,820	2,175,095

*Excluding houses of a Rateable Value exceeding £78 (£105 in the Metropolitan area).

Table showing the number of houses completed in England and Wales (i) with and (ii) without State assistance during the year ended September 30, 1933, and since the war. (See Sir Hilton Young's remarks in the House of Commons, printed above.)

Sir F. Fremantle asked the Minister of Health if he would give the number of houses completed during the year ended September 30, 1933, under each of the several Housing Acts since the war; the number completed during the same year without public financial assistance; and the totals under the same headings erected since the war.

Sir Hilton Young said that the following statement showed the number of houses completed in England and Wales (i) with and (ii) without State assistance during the year ended September 30, 1933, and since the war. (See table below.)

This statement did not take into account 13,847 houses provided to rehouse persons displaced under improvement and Reconstruction Schemes prior to the Housing Act; 1930.

Sir F. Fremantle asked the Minister of Health if he would state the number of cottages erected in agricultural parishes during the years ended September 30, 1932 and 1933, respectively; and the average rental at which such cottages were let.

Sir Hilton Young said that the numbers of houses completed with State assistance in agricultural parishes in England and Wales during the years ended September 30, 1932 and 1933, were 4,392 and 3,103 respectively. He had no information as to the average rental of such houses.

Mr. McEntee asked whether the building societies supplied information in regard to the number of house purchasers whose mortgages they had foreclosed; and what were the figures for each of the past five years.

Sir Hilton Young said that the reply to the first part of the question was in the negative, and he was therefore unable to give the figures asked for in the second part.

Slum

Sir A. Beit asked the Minister of Health if he would state the total estimated number of slum-dwellers in England and Wales; the estimated percentage of this number which would be affected by the various slum-clearance schemes submitted to him by the local authorities in response to his recent circular; and the total estimated cost of such schemes.

Sir Hilton Young said that the best estimation he could give was that the five year programmes now being submitted by local authorities which dealt with the existing slums in those areas would involve the rehousing of more tha none million persons. The estimated cost of carrying out the programmes was £95,000,000.

Mr. A. Bevan asked the Minister of Health if he would state the number of urban district councils in necessitous areas who has found it financially impossible to submit slum-clearance schemes: and what steps he proposed to take to assist them.

Sir Hilton Young said that no urban district council had informed him that on financial grounds it was unable to submit the programme which in common with other housing authorities it had been asked to furnish. The last part of the question did not therefore arise.

Sir Hilton Young informed Sir F. Fremantle that the numbers of houses reconditioned in England and Wales under the Housing (Rural Workers) Acts, 1926 and 1931, during the years ended September 30, 1932 and 1933, were 1,286 and 869 respectively.

In reply to Mr. H. G. White, Sir Hilton Young said that the recommendations of the Moyne Committee were receiving consideration in the light of the observations now received from the associations of local authorities concerned.

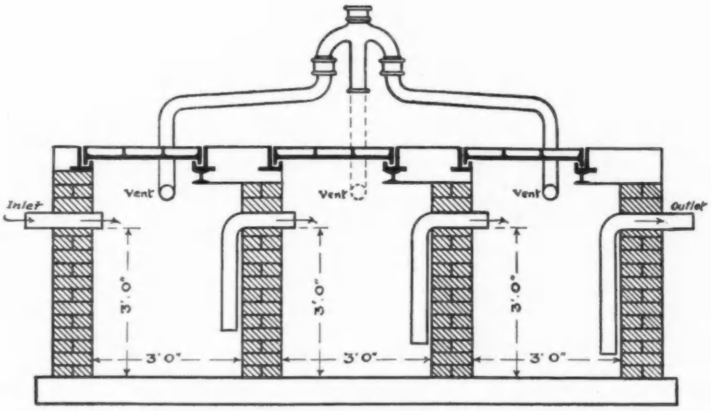
Housing and Town Planning Conference

The programme of the National Housing and Town Planning Conference, to be held at Malvern from Friday, November 24, to Monday, November 27, is as follows:

FRIDAY, NOVEMBER 24 (5.45 p.m.): At the County Hotel, Malvern. Subject: "The Administration of the Town and Country Planning Act, 1932." A paper will be submitted by Professor Patrick Abercrombie, M.A., F.R.I.B.A., of the University of Liverpool, entitled "The Application of the Town and Country Planning Act in Regional Schemes." The speakers will include Messrs. T. Alwyn Lloyd, F.R.I.B.A., H. H. Humphries, C.B.E., M.INST.C.E., and Thomas Somers, M.INST.C.E.

SATURDAY, NOVEMBER 25 (10 a.m.): At the Winter Gardens, Malvern. Papers will be submitted as follows: "The Present Housing Situation in England and Wales, and the Provisions of the Housing Act, 1930." By Mr. John G. Martin. "The Position of Housing in Scotland," by Sir William E. Whyte. "The Repair or Demolition of Individual Insanitary Houses," by Mr. H. Lloyd Parry, O.B.E., B.A., B.SC., LL.B. Afternoon Session (2.15 p.m.-4.45 p.m.):—The Right Hon. Sir Hilton Young, G.B.E., D.S.O., D.S.C., M.P., Minister of Health, has promised to address the delegates on "Slum Clearance." 5.30 p.m.—Joint Meeting at the County Hotel of the Executive and General Committees of the National Council. 8.15 p.m. —Special Performance at the Malvern Theatre of a Play entitled "Chinese White."

SUNDAY, NOVEMBER 26 (1.45 p.m.-4 p.m.): Circular drive in motor coaches through the Malvern District. 5 p.m.-6.30 p.m.—A lantern lecture on "The Preservation of Rural England" will be given at the Winter Gardens by Major-General Sir Fabian Ware, K.C.V.O. 8.15 p.m. —Grand Concert at the Winter Gardens.



TRADE NOTES

[BY F. R. S. YORKE, A.R.I.B.A.]

Flexible Wallboard

AT the Exhibition of Finnish Furniture, at Fortnum and Mason's, I saw a new type of wallboard, known as Ensolyne. It is flexible, being only $\frac{1}{16}$ in. thick, and is supplied in rolls 10 feet wide by 100 feet long, so that it can be applied without joints over large wall areas. Its natural colour is light brown, but it may be painted or distempered. It is obtainable with smooth or slightly corrugated surfaces (see sketch). It is said to have good acoustic properties, but figures are not yet available.

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The board is applied to walls before skirtings, etc., are fixed. Sheets are cut to the full dimensions of each wall and are moistened with a wet brush: they are then re-rolled and placed vertically against the walls (see photograph adjoining) andthe top and bottom edges are tacked to wood members, or plugs in brickwork. Alternatively the board may be applied with paste, containing 33 per cent. joinery glue.

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Door and window openings are covered, and rough light and access holes are cut provisionally. Whilst the material is moist it must be tacked to the window and door frames; when it is dry, and has become taut, the edges are trimmed. Detailed instructions for fixing may be obtained from Wood Products, who are marketing Ensolyne in this country.

Architectural Lighting

Whilst remodelling their showrooms in Kingsway, Messrs. G.E.C. have added a modern architectural lighting demonstration department to the series of rooms containing period and "modernistic" visible lighting fittings, and in it every form of wall and ceiling illumination from concealed sources: lay lighting, cornices, decorative wall panels, and so on, are demonstrated in such a way that the architect, who has an illumination problem to solve, can see immediately the effect that results from use of lamps of varying degrees of intensity with stippled, coloured, or etched diffusing glass and variations of reflector arrangement and colouring.

In order to enable the reader to form a mind-picture of the apartment containing these modern lighting devices, I cannot do better than quote from a recent publication of the G.E.C.:—

"These structural lighting settings consist of overflowing fountains, recessed windows with rainbow hued curtains of light, the rays of morning sunrise or crimson sundown, and mirror lighting settings of refinement.

"Again there are marigolds, sunflowers, and even cobwebs fashioned in light to catch the eye and hold one spellbound when making a tour of this wonderful home of electric lighting and electrical progress."

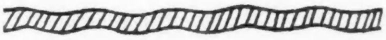
Cast Iron Sanitary Goods

I received last week two of the most interesting and informative manufacturers' booklets I have seen for some time. They come from Burn Brothers and the Thames Bank Iron Company and both are catalogues of cast iron sanitary fittings, full of the most fascinating diagrams, and notes covering every aspect of sanitation from gullies and inspection covers to sewage disposal and gassing rats. The diagram at the head of these notes is typical of the illustrations; it shows the standard arrangement specified by the London County Council for garage petrol interceptors, to prevent petrol being carried into the sewer and causing explosion. The sizes of the bends are determined by the amount of water involved, and the sizes and

A roll of flexible wallboard, cut to the full dimensions of the wall, is tacked along its top and bottom edges.

Above: A rough access opening is cut when the board has been tacked to the door frame.

Below: Full-size section through a strip of flexible wallboard.



strength of the covers and frames by the weight of traffic passing over them. Each chamber is ventilated by a 3-in. pipe.

Cement Finishes

The Cement Marketing Co.'s new demonstration van sets off this week on a long journey through England—it will probably be away for three years, showing cement products to architects. The van is large and the interior is fitted as a showroom for the display of various wall and floor finishes obtainable through the use of white and coloured cements. It is also equipped with a projection room and screen for the exhibition of sound films, and architects in the provinces, unable to take advantage of the facilities offered by the London showroom, will now be able to see samples of actual materials, side by side with filmic demonstrations of their application to building.

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The samples are sufficiently large to enable one to arrive at a reasonable appreciation of the appearance of the material over large surfaces; they include Cullamix (flint chippings and coloured cement) renderings, standard Cullamix floor tiles, and slabs for lining the sides and floors of swimming pools (made on vibrating table); renderings with aggregates exposed by scrubbing, grinding and polishing and by the application of retarding liquid. The aggregates include china clay sand, black and white marble, red and grey granite, pea shingle, burnt ballast, red brick exposed and polished and buff Colourcrete bush hammered.

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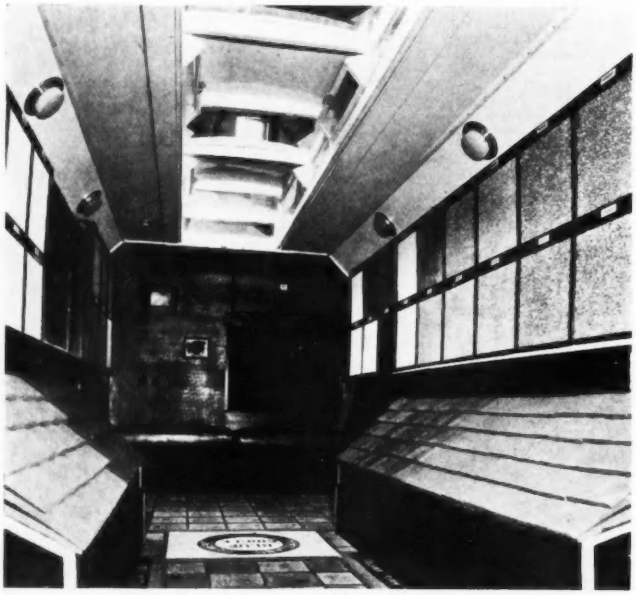
The arrangement is such that demonstrations may be made in the shortest possible time; the selection of samples is unusually good, and architects who spare some minutes to see the show will not find their time wasted.



Interior of a travelling van equipped for the demonstration of uses of white and coloured cements. The walls are lined with specimen renderings and the floor with cement and flint tiles, jointed with rubber strips.

Coal Utilization Exhibit Opened at the Building Centre

The Coal Burning Section at the Building Centre, 158 New Bond Street, was formally opened by Mr. Evan Williams, president of the Mining Association of Great Britain, on November 8.

Mr. Williams said that hitherto the coal industry had not taken any direct part in what might be called the scientific and artistic development of heating in connection with architecture and building. With the establishment of the Coal Utilization Council, however, by whom this exhibit had been organized, the industry had taken the first step in what was intended to be a persistent effort to let people know what coal can do for them. He emphasized that there was no sort of hostility on the part of the Coal Utilization Council or of the Coal Industry towards the cognate industries of Gas and Electricity, both of which had given notable practical examples of what could be done by judicious and effective publicity. He felt sure, however, that these industries, for their part, would not take exception if the coal industry suggested that there were other methods of using coal that possessed advantages not possessed by gas and electricity. He hoped that the three industries might go forward as one united body to secure the fullest use of the fuel produced in this country, and its progressive substitution, whenever possible, and in the most appropriate form, for fuel imported from abroad.

THE BUILDINGS ILLUSTRATED

Sub-Contractors' List

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:—

Showrooms in Brook Street, W. (pages 665-667). General contractors, F. Foxley & Co., Ltd., who were also responsible for the desks, tables and display cases. Sub-contractors: Tyler and Freeman, electrical installation; Louis Dernier and Hamlyn, Ltd., electric light fittings; Venesta, flush doors and oak-faced ply; Gordon Russell, Ltd., door furniture, chairs and covering materials; B. Holden & Co., Ltd., linoleum; Osda, Ltd., chairs; Hesters, Ltd., covering materials: Nash and Hull, Ltd., external name letters: W. James & Co., Ltd., metal doors to first floor showroom.

School at Wembley (pages 671-673). General contractors, John Laing and Son, Ltd. Sub-contractors: Indented Bar & Concrete Engineering Co., Ltd., reinforced concrete; A. D. Dawnay and Sons, Ltd., steelwork; Crittall Manufacturing Co., Ltd., metal windows; Enfield Stone Co., artificial stone: Wm. F. Rees, Ltd., tarpaving; Granwood Flooring Co., Ltd., flooring; T. A. Harris, Ltd., sanitary fittings: Clark, Hunt & Co., Ltd., cloakroom fittings: Read and Partners, Ltd., electric heating and electric light; Morganite heating panels supplied by Unity Heating Ltd.: Blackwells and National Roofing, Ltd., asphalt roofing: Bolton and Hayes, Ltd., asphalt floors: Dorking Brick Co., Ltd., bricks; Dulux, Nobel Chemical Finishes, Ltd., paint: Matsine, Mander Bros., stain; F. Thomas & Co., stainless steel lamps: Carter and Aynsley, door furniture and ironmongery; S. Elliott and Sons (Reading), Ltd., flush doors: F. and E. Eastman, stair treads.

Regal Cinema, Wimbledon (pages 652, 660-662). General contractors, Gee, Walker and Slater, Ltd. Sub-contractors: Fleming Bros., steelwork: Plastering, Ltd., fibrous plaster: Mollo and Egan, painted decorations; Drake and Gorham, Ltd., electrical installation: F. H. Pride, electric fittings: George Pixton & Co., Ltd., carpets and seating; F. H. Carpenter and Son, Ltd., curtains and draperies: Swanser and Son, Ltd., canopy and metal grilles: Potter Rex Gate Co., Ltd., handrails: Walter Cassey, Ltd., door furniture: J. S. Wright & Co., kitchen equipment: Norris Warming Co., Ltd., heating and ventilation: Alfred Goslett & Co., Ltd., sanitary fittings: Hoffman Sprinkler Co., Ltd., fire appliances; Girlings Ferro-Concrete Co., Ltd., stone front, balcony steppings and pre-cast steps: Crittall Manufacturing Co., Ltd., metal windows; Western Electric Co., Ltd., Knight & Co. (Engineers), Ltd., talkie installation, fire curtain and bio shutters; Thos. Cook, Ltd., entrance hall floor: General Asphalting Co., Ltd., asphalting: Sturtevant Engineering Co., Ltd., vacuum plant; P. Conacher & Co., organ: Hammond Bros. and Champness, Ltd., console lift: Gimson & Co. (Leicester), Ltd., counterweights: Automaticket, Ltd., ticket machine; Trussed Concrete Steel Co., Ltd., Reinforced Concrete Engineers, suspended ceilings.

Manufacturers' Items

Mr. Henry C. Walker, Chairman of Messrs. Waygood-Otis, Ltd., who has been with the company for nearly 70 years, is retiring on account of his age, which is just on 83.

Mr. D. W. R. Green, the Managing Director, has been elected Chairman in place of Mr. Walker. Mr. W. W. Weaver has been appointed Managing Director. Messrs. H. Harmsworth and C. H. J. Day, both of whom have been Directors for many years, are also retiring.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

BARKING. *Swimming Baths.* The Corporation has approved a scheme for the erection in reinforced concrete of two covered swimming baths on land at the junction of Porters Avenue and Cannington Road, and authorised the Borough Engineer to prepare plans and estimates.

CATERHAM. *Church and Houses.* Plans passed by the U.D.C.: Two houses, Harestone Valley Road, for Mr. A. E. Poland; four houses, Church Road, for Sir B. Greenwell; 11 houses, Campbell Road, for Mr. C. Plater; 12 houses, Salmons estate, for Mr. N. C. Webber; two houses, Trentham Drive, for Mr. M. G. Sharpe; church, off Godstone Road, for Mr. E. Marwood, on behalf of Whyteleafe United Free Church.

CHELSEA. *Bridge.* The L.C.C. now proposes to undertake the scheme for the reconstruction of Chelsea Bridge at a cost of £480,000 for four lines of traffic, and proposes to appoint Sir Frederick Palmer as engineer.

CROXLEY GREEN. *Estate.* The Headstone Manor Estate Company, the owners of the Durrants estate, Baldwins Lane, Croxley Green, have submitted plans to the Rickmansworth U.D.C. for a development of the whole of the estate, which covers a considerable area, and has a frontage on to the main road.

FINSBURY. *Offices.* The Metropolitan Water Board has approved plans for extensions at the offices at Fisnbury, at a cost of £43,000.

HAMPSTEAD. *Flats.* Mr. Wells Coates is to erect 31 flats in Lawn Road, Hampstead.

KENNINGTON. *Housing Scheme.* The L.C.C. is to acquire 14 acres at Kennington Oval for a rehousing scheme, estimated to involve an outlay of £500,000. Thirteen blocks of tenements will be provided, with shops.

POPLAR. *Dwellings.* The L.C.C. has acquired a site at Bromley Maltings, Poplar, for the erection of dwellings. The cost of the site, 2½ acres, and its clearance, is estimated at £17,000.

SOUTHALL-NORWOOD. *Houses, Bakery and Public House.* Plans passed by the U.D.C.: Eight houses, Kenton Avenue, for Messrs. G. Wimpey & Co., Ltd.; two houses, Delamere Road, for Hayes Bridge Estate, Ltd.; 11 houses, Allenby Road, for Messrs. G. Wimpey & Co., Ltd.; four houses, Dorset Avenue, for Messrs. Warren and Woods; bakery, Western Road, for General Housing Co.; public-house, Uxbridge Road, for the Royal Brewery Co., Ltd.; 43 houses (amended plan), St. Joseph's estate, for Sharon Development Co., Ltd.

WOOD GREEN. *Swimming Bath.* The U.D.C. has obtained sanction from the Ministry of Health to proceed with the scheme for the provision of an open-air bath, at a cost of £26,000.

SOUTHERN COUNTIES

BERKSHIRE. *Hospital.* The C.C. has prepared a scheme for the provision of isolation hospital accommodation, at a cost of £5,800, and is to erect a new block at the mental hospital at a cost of £21,700.

PORTSMOUTH. *Houses and Shops.* Plans passed by the Corporation: 12 houses, Station Road, Farlington, for Messrs. Brown and Fuller; shop and depot, London Road, for Portsea Island Mutual Co-operative Society, Ltd.; two houses, First Avenue, for Mr. F. H. Munday; 16 houses, Maylands Avenue, for Mr. J. May; five houses, Carmarthen Avenue, for Mr. C. R. Attwell; 16 houses, Southdown Road, Cosham, for Mr. R. Bell; 10 houses, Stride Avenue, for Portsmouth Modern Houses, Ltd.; five houses, Villiers Road, for Mr. E. H. Harvey.

SOUTH-WESTERN COUNTIES

PLYMOUTH. *Houses.* Plans passed by the Corporation: Eight houses and one shop, Pemros Road, for Mr. C. Jope; two houses, Tavistock Road, for Mr. H. L. Pile; two bungalows, Kenilworth Road, for Mr. F. Westcott; four houses, Vine estate, for Messrs. Curtis and Steer; six houses, East Park Avenue, for Messrs. Brown and Sleeman; two houses, Hill Top Crest, for Messrs. A. E. Searle and Son; two houses, Vine estate, for Mr. A. J. Osborn; two houses, Vine estate, for Mr. H. Chapman; two houses, Cranmere Road, for Messrs. J. Davy and Son; seven houses, Rose Dale, Peverell, for Mr. C. R. Tozer; 11 houses, Ridge Park Road, for Mr. J. Neal; three houses, Venn Crescent, for Mr. J. Dyer; 12 houses, Sturdee Road, for Messrs. Pearce Bros.; two houses, Camilla Terrace, for Mr. A. H. White; two houses, Vapron Road, for Messrs. Oldrey & Co.; three houses, Peverell Park Road, for Mr. J. F. Woodley; four houses, Woodside, for Messrs. Mexboro, Ltd.; six houses, Edgcombe Park estate, for Messrs. S. Tellam and Son; two houses, Brancker Road, for Messrs. Pengelley Bros.

TORQUAY. *Estate Lay-out, Houses and Flats.* Plans passed by the Corporation: Lay-out (amended plan), Rockwood estate, for the Syndicate; two houses, Burridge Road, for Messrs. C. J. Donovan and Son; two houses, Cadewell Lane, for Mr. G. Davey; conversion into three flats, The Briary, Lower Erith Road, for Mr. A. Hill; eight houses, Lower Audley Road, for Messrs. H. Lloyd and Son.

EASTERN COUNTIES

IPSWICH. *Slum Clearance Scheme.* The Corporation has prepared a five-year scheme for the provision of 1,739 houses.

MIDLAND COUNTIES

CHESTERFIELD. *Houses.* Plans passed by the Corporation: Seven houses, Four Lane Ends, Cutthorpe, for Mr. G. Beresford; two houses, Newbridge Lane, for Mr. A. Mowbray; extension to works, Clayton Street, for Messrs. J. Clayton and Sons, Ltd.; three houses, Valley Road, Spital, for Messrs. J. Collis and Sons, Ltd.; two houses, Hasland Green, for Mr. E. Randall; two houses, Newbold Avenue, for Mr. F. Denham.

SUTTON COLDFIELD. *Houses.* Plans passed by the Corporation: Eight houses, Cremorne Road, for Mrs. Harrison; 25 houses (amended plan), Chester Road, for Mr. A. Robinson; 14 houses, Knighton Close, for Messrs. Streathers, Ltd.; two houses, Lichfield Road, for Mrs. H. V. James; clubhouse, Walmley Village, for Walmley Social Club.

The Corporation Housing Committee reports that the Ministry of Health has approved the proposal to erect 168 houses on the Holland House estate, on the understanding that some 60 to 68 houses be allocated for rehousing purposes.

NORTHERN COUNTIES

AYCLIFFE. *School.* The Durham County Council is to make immediate application for sanction to borrow £38,400 as the first of three instalments of the total estimated expenditure of £107,200 proposed to be expended on the mental institution school at Aycliffe.

BLYTH. *Housing Scheme.* The Corporation has prepared a five-year housing scheme for 1,258 houses, at a cost of £486,864.

CHORLEY. *Houses.* Plans passed by the Corporation: 20 houses, Bolton Road, for Mr. G. F. Norris; three houses, Oakwood Road, for Messrs. A. Derbyshire & Co.; four houses, Park Road, for Mr. Z. Wilkinson; two houses, Millfield Road, for Messrs. Jas. Brindle and Sons; four shops, Ash Grove, for Mr. G. F. Norris.

ESTON. *Houses and Bungalows.* The U.D.C. is seeking sanction from the Ministry of Health to proceed with the erection of a further 200 two-bedroomed houses, and 50 bungalows, for aged persons on the Grangetown estate.

HULL. *Institution.* The Corporation is to proceed with the preparation of the working drawings, etc., and to obtain tenders for the portion of the proposed male colony at Winestead to be proceeded with immediately at an estimated cost of £40,000, and also approved plans of the lay-out of the proposed extensions at Tilworth Grange institution.

NORTHUMBERLAND. *Schools.* Northumberland Education Committee is to erect practical instruction rooms at five schools, at a cost of £7,000.

ROTHERHAM. *Schools.* The Education Committee has instructed the borough engineer to prepare plans for a junior mixed school at Eastwood, to accommodate 400 children, and to incorporate in the scheme a nursery school to accommodate 70 children.

SCARBOROUGH. *Houses.* Plans passed by the Corporation: Two houses, Whin Bank, and workshops, Lower Nelson Street, for Mr. T. W. Whipp; three houses, Woodall Avenue, for Mr. G. E. Moore; seven houses, off Park Road for Mr. F. Shaw; four houses, Peasholm Gardens, for Messrs. F. Mitchell and Sons; two houses, Northstead Road, for Messrs. J. Petch and Son; two houses, Northstead Road, for Mr. A. E. Wright.

SHEFFIELD. *Houses.* Plans passed by the Corporation: Four houses, Meadow View Road, for Mr. C. H. Beardow; two houses, Marlcliffe Road, for Mr. B. F. Glossop; six houses, Hollinshead Road, for Messrs. Maxfield Bros.; 60 flats, off Tree Root Walk, for Messrs. J. H. S. Randall, Ltd.; house and two shops, Sicey Avenue, for Mr. P. Maroney; 152 houses, Woodthorpe estate, for Estates Committee; 33 houses, Rydalhurst Avenue, for Mr. F. Lamb; four houses, Senior Road, for Messrs. W. and E. Sadler, Ltd.; four houses, Warminster Place, for Mr. J. Dyson; 252 houses, Woodlands estate, for Messrs. Reeves Charlesworth, Ltd.; house and warehouse, Attercliffe Road, for Messrs. Carter and Son; four houses, Carfield Road, for Mr. J. Barker; two houses, Highcliffe Road, for Mr. R. Watson; four houses, Lyminster Road, for Mr. D. A. Hurrell; 12 houses, off Sandygate Road, for Messrs. T. A. Knowles and Sons; two houses, Parkwood Road, for Mr. J. C. Mason; six houses, High Cliff Drive, for Mr. H. Simpson; four houses, Derbyshire Lane, for Mr. James Marsh; 24 houses, Shiregreen Lane, and eight in Elm Lane, for Messrs. Oxspring Bros; nine houses, Tiftwood Road, for Mr. M. Silman; two houses, Barnsley Road, for Mr. C. B. M. Wilson; four houses, Pingle Road, for Mr. J. Bailey; 25 houses, Springfield Road, for Mr. W. Newsome; four houses, Woodthorpe Arms estate, for Messrs. J. H. Naylor and Sons.

SHIPLEY. *Crematorium.* The U.D.C. has allocated a site at Nab Wood cemetery for the provision of a crematorium.

SOUTH SHIELDS. *Market.* The Corporation has prepared a scheme for covering in the market place at a cost of £11,500.

TYNEMOUTH. *Slum Clearance.* The Corporation proposes to erect 1,200 houses during the next five years to rehouse persons to be displaced from properties to be dealt with under the slum clearance programme.

WALLASEY. *New Promenade.* The Corporation recommends that the new promenade at New Brighton be extended from the Red Noses to Harrison Drive, at an estimated cost of £517,681, and that the work be entrusted to Messrs. Edmund Nuttall, Sons & Co., Ltd.

YORK. *Flats.* The Corporation Housing Committee has received sanction to borrow £8,170 for the erection of 44 flats for rehousing purposes.

SCOTLAND

GLASGOW. *Houses.* The Corporation has arranged for the erection of 8,750 houses, in the next five years.

GLASGOW. *School.* The Education Committee is to prepare plans for the erection of a semi-permanent school for 800, at the Cardonald housing estate.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen ; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A₁	ABERDARE ..	S. Wales & M.	1 5	1 0¾
A₁	Abergavenny ..	S. Wales & M.	1 5	1 0¾
A₃	Abingdon ..	S. Counties	1 4	1 0
A	Accrington ..	N.W. Counties	1 5½	1 1¼
A₃	Addlestone ..	S. Counties	1 4	1 0
A	Adlington ..	N.W. Counties	1 5½	1 1¼
A	Airdrie ..	Scotland	*1 5½	1 1¼
C	Aldeburgh ..	E. Counties	1 1½	10¼
A	Altrincham ..	N.W. Counties	1 5½	1 1¼
B₃	Appleby ..	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A₃	Atherstone ..	Mid. Counties	1 4	1 0
B₂	Aylesbury ..	S. Counties	1 2½	11
B₁	BANBURY ..	S. Counties	1 3	11¼
B₁	Bangor ..	N.W. Counties	1 3	11¼
A₃	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley ..	Yorkshire	1 5½	1 1¼
B	Barnstaple ..	S.W. Counties	1 3½	11¾
A	Barrow ..	N.W. Counties	1 5½	1 1¼
A	Barry ..	S. Wales & M.	1 5½	1 1¼
B₁	Basingstoke ..	S.W. Counties	1 3	11¼
A₃	Bath	S.W. Counties	1 4	1 0
A	Batley ..	Yorkshire	1 5½	1 1¼
A₃	Bedford ..	E. Counties	1 4	1 0
A₂	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A₂	Bewdley ..	Mid Counties	1 4½	1 0½
B₃	Bicester ..	S. Counties	1 2	10½
	Birkenhead ..	N.W. Counties	*1 7	1 2¼
A	Birmingham ..	Mid. Counties	1 5½	1 1¼
A₁	Bishop Auckland	N E. Coast	1 5	1 0¾
A	Blackburn ..	N.W. Counties	1 5½	1 1¼
A	Blackpool ..	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B₂	Bognor ..	S. Counties	1 2½	11
A	Bolton ..	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A	Bournemouth ..	S Counties	1 4	1 0
B₂	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford ..	Yorkshire	1 5½	1 1¼
A₁	Brentwood ..	E. Counties	1 5	1 0¾
A	Bridgend ..	S. Wales & M.	1 5½	1 1¼
B₁	Bridgwater ..	S.W. Counties	1 3	11¼
A₁	Bridlington ..	Yorkshire	1 5	1 0¾
A	Brighouse ..	Yorkshire	1 5½	1 1¼
A₃	Brighton ..	S. Counties	1 4	1 0
A	Bristol ..	S.W. Counties	1 5½	1 1¼
B₃	Brixham ..	S.W. Counties	1 2	10½
A₂	Bromsgrove ..	Mid. Counties	1 4½	1 0½
C	Bromyard ..	Mid. Counties	1 1½	10¼
A	Burnley ..	N.W. Counties	1 5½	1 1¼
A	Burslem ..	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A₁	Buxton ..	N.W. Counties	1 5	1 0¾
A₂	CAMBRIDGE ..	E. Counties	1 4½	1 0½
B₂	Canterbury ..	S. Counties	1 2½	11
A	Cardiff ..	S. Wales & M.	1 5½	1 1¼
A	Carlisle ..	N.W. Counties	1 5½	1 1¼
B	Carmarthen ..	S. Wales & M.	1 3½	11¾
B	Carnarvon ..	N.W. Counties	1 3½	11¾
A	Carnforth ..	N.W. Counties	1 5½	1 1¼
A	Castleford ..	Yorkshire	1 5½	1 1¼
B	Chatham ..	S. Counties	1 3½	11¾
B	Chelmsford ..	E. Counties	1 3½	11¾
A₃	Cheltenham ..	S.W. Counties	1 4	1 0
A	Chester ..	N.W. Counties	1 5½	1 1¼
A	Chesterfield ..	Mid. Counties	1 5½	1 1¼
B₂	Chichester ..	S Counties	1 2½	11
A	Chorley ..	N.W. Counties	1 5½	1 1¼
B₂	Cirencester ..	S. Counties	1 2½	11
A	Clitheroe ..	N.W. Counties	1 5½	1 1¼
A	Clydebank ..	Scotland	1 5½	1 1¼
A	Coalville ..	Mid. Counties	1 5½	1 1¼
A₃	Colchester ..	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A₂	Colwyn Bay	N.W. Counties	1 4½	1 0½
A₁	Consett ..	N.E. Coast	1 5	1 0¾
A₂	Conway ..	N.W. Counties	1 4½	1 0½
A	Coventry ..	Mid. Counties	1 5½	1 1¼
A₂	Crewe ..	N.W. Counties	1 4½	1 0½
A₃	Cumberland ..	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen ..	N.W. Counties	1 5½	1 1¼
A₂	Deal	S. Counties	1 2½	11
A₃	Denbigh ..	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury ..	Yorkshire	1 5½	1 1¼
B	Didcot ..	S. Counties	1 3½	11¾
A	Doncaster ..	Yorkshire	1 5½	1 1¼
B₂	Dorchester ..	S.W. Counties	1 2½	11
A₃	Driffield ..	Yorkshire	1 4	1 0
A₂	Droitwich ..	Mid. Counties	1 4½	1 0½
A	Dudley ..	Mid. Counties	1 5½	1 1¼
A	Dundee ..	Scotland	1 5½	1 1¼
A	Durham ..	N.E. Coast	1 5½	1 1¼
A₃	EASTBOURNE	S. Counties	1 4	1 0
A₁	Ebbw Vale ..	S. Wales & M.	1 5	1 0¾
A	Edinburgh ..	Scotland	1 5½	1 1¼
A₁	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A₂	Exeter ..	S.W. Counties	*1 4½	1 0½
B₁	Exmouth ..	S.W. Counties	1 3	11¼
A₃	FELIXSTOWE	E. Counties	1 4	1 0
A₃	Filey	Yorkshire	1 4	1 0
A	Fleetwood ..	N.W. Counties	1 5½	1 1¼
B₂	Folkestone ..	S. Counties	1 2½	11
A	Frodsham ..	N.W. Counties	1 5½	1 1¼
B₂	Frome ..	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham ..	S. Counties	1 3½	11¾
A₂	Gloucester ..	S.W. Counties	1 4½	1 0½
A₂	Goole	Yorkshire	1 4½	1 0½
A₃	Gosport ..	S. Counties	1 4	1 0
A₃	Grantham ..	Mid. Counties	1 4	1 0
A₁	Gravesend ..	S. Counties	1 5	1 0¾
A	Greenock ..	Scotland	*1 5½	1 1¼
A	Grimsby ..	Yorkshire	1 5½	1 1¼
B₁	Guildford ..	S. Counties	1 3	11¼
A	HALIFAX ..	Yorkshire	1 5½	1 1¼
A	Hanley ..	Mid. Counties	1 5½	1 1¼
A	Harrogate ..	Yorkshire	1 5½	1 1¼
A	Hartlepools ..	N.E. Coast	1 5½	1 1¼
B	Harwich ..	E. Counties	1 3½	11¾
B₂	Hastings ..	S. Counties	1 2½	11
A₃	Hatfield ..	S. Counties	1 4	1 0
B	Hereford ..	S.W. Counties	1 3½	11¾
A₃	Hertford ..	E. Counties	1 4	1 0
A	Heysham ..	N.W. Counties	1 5½	1 1¼
A	Howden ..	N.E. Coast	1 5½	1 1¼
A	Huddersfield ..	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY ..	Yorkshire	1 5½	1 1¼
A	Immingham ..	Mid. Counties	1 5½	1 1¼
A₃	Ipswich ..	E. Counties	1 4	1 0
B₃	Isle of Wight ..	S. Counties	1 2	10½
A	JARROW ..	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY ..	Yorkshire	1 5½	1 1¼
B	Kendal ..	N.W. Counties	1 3½	11¾
B	Keswick ..	N.W. Counties	1 3½	11¾
A₂	Kettering ..	Mid. Counties	1 4½	1 0½
A₂	Kidderminster	Mid. Counties	1 4½	1 0½
B₂	King's Lynn ..	E. Counties	1 2½	11
A	LANCASTER ..	N.W. Counties	1 5½	1 1¼
A₁	Leamington ..	Mid. Counties	1 5	1 0¾
A	Leeds ..	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester ..	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B₃	Lewes	S. Counties	1 2	10½
A₂	Lichfield ..	Mid. Counties	1 4½	1 0½
A	Lincoln ..	Mid. Counties	1 5½	1 1¼
	Liverpool ..	N.W. Counties	*1 7	1 2¼
A₂	Llandudno ..	N.W. Counties	1 4½	1 0½
A	Llanelly ..	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton ..	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A₃	Luton	E. Counties	1 4	1 0
A	Lytham ..	N.W. Counties	1 5½	1 1¼
A₁	MACCLESFIELD	N.W Counties	1 5	1 0¾
B	Maidstone ..	S. Counties	1 3½	11¾
A₃	Malvern ..	Mid. Counties	1 4	1 0
A	Manchester ..	N.W. Counties	1 5½	1 1¼
A	Mansfield ..	Mid. Counties	1 5½	1 1¼
B₁	Margate ..	S. Counties	1 3	11¼
A₃	Matlock ..	Mid. Counties	1 4	1 0
A₁	Merthyr ..	S. Wales & M.	1 5	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A₂	Middlewich ..	N.W. Counties	1 4½	1 0½
B₂	Minehead ..	S.W. Counties	1 2½	11
B₂	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe ..	N.W. Counties	1 5½	1 1¼
A₂	NANTWICH ..	N.W. Counties	1 4½	1 0½
A	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson ..	N.W. Counties	1 5½	1 1¼
A	Newcastle ..	N.E. Coast	1 5½	1 1¼
A	Newport ..	S. Wales & M.	1 5½	1 1¼
A	Normanton ..	Yorkshire	1 5½	1 1¼
A₁	Northampton ..	Mid. Counties	1 5	1 0¾
A	North Staffs. ..	Mid. Counties	1 5½	1 1¼
A	North Shields ..	N.E. Coast	1 5½	1 1¼
A₂	Norwich ..	E. Counties	1 4½	1 0½
A	Nottingham ..	Mid. Counties	1 5½	1 1¼
A	Nuneaton ..	Mid. Counties	1 5½	1 1¼
A₃	OAKHAM ..	Mid. Counties	1 4	1 0
A	Oldham ..	N.W. Counties	1 5½	1 1¼
A₃	Oswestry ..	N.W. Counties	1 4	1 0
A₂	Oxford ..	S. Counties	1 4½	1 0½
A	PAISLEY ..	Scotland	*1 5½	1 1¼
B₃	Pembroke ..	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A₂	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth ..	S.W. Counties	*1 5½	1 1¼
A	Pontefract ..	Yorkshire	1 5½	1 1¼
A₁	Pontypridd ..	S. Wales & M.	1 5	1 0¾
A₃	Portsmouth ..	S. Counties	1 4	1 0
A	Preston ..	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A₂	READING ..	S. Counties	1 4½	1 0½
B	Reigate ..	S. Counties	1 3½	11¾
A₃	Retford ..	Mid Counties	1 4	1 0
A₁	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A₃	Ripon	Yorkshire	1 4	1 0
A	Rochdale ..	N.W. Counties	1 5½	1 1¼
B	Rochester ..	S. Counties	1 3½	11¾
A₁	Ruabon ..	N.W. Counties	1 5	1 0¾
A	Rugby ..	Mid. Counties	1 5½	1 1¼
A₃	Rugeley ..	Mid. Counties	1 4	1 0
A	Runcorn ..	N.W. Counties	1 5½	1 1¼
A₂	ST. ALBANS ..	E. Counties	1 4½	1 0½
A	St. Helens ..	N.W. Counties	1 5½	1 1¼
B₃	Salisbury ..	S.W. Counties	1 2	10½
A₁	Scarborough ..	Yorkshire	1 5	1 0¾
A	Scunthorpe ..	Mid. Counties	1 5½	1 1¼
A	Sheffield ..	Yorkshire	1 5½	1 1¼
A	Shipley ..	Yorkshire	1 5½	1 1¼
A₂	Shrewsbury ..	Mid. Counties	1 4½	1 0½
A₂	Skipton ..	Yorkshire	1 4½	1 0½
A₃	Slough ..	S. Counties	1 4	1 0
A₂	Solihull ..	Mid. Counties	1 4½	1 0½
A₂	Southampton	S. Counties	1 4½	1 0½
A₂	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport ..	N.W. Counties	1 5½	1 1¼
A	S. Shields ..	N.E. Coast	1 5½	1 1¼
A₂	Stafford ..	Mid. Counties	1 4½	1 0½
A	Stockport ..	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud ..	S.W. Counties	1 3½	11¾
A	Sunderland ..	N.E. Coast	1 5½	1 1¼
A	Swadlincote ..	Mid. Counties	1 5½	1 1¼
A	Swansea ..	S. Wales & M.	1 5½	1 1¼
A₃	Swindon ..	S.W. Counties	1 4	1 0
A₁	TAMWORTH ..	N.W. Counties	1 5	1 0¾
B	Taunton ..	S.W. Counties	1 3½	11¾
A	Teesside Dist. ..	N.E. Counties	1 5½	1 1¼
A₃	Teignmouth ..	S.W. Coast	1 4	1 0
A	Todmorden ..	Yorkshire	1 5½	1 1¼
A₁	Torquay ..	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall ..	Mid. Counties	1 5½	1¼
A	Tyne District ...	N. E. Coast	1 5½	1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall ..	Mid. Counties	1 5½	1 1¼
A	Warrington ..	N.W. Counties	1 5½	1 1¼
A₁	Warwick ..	Mid. Counties	1 5	1 0¾
A₂	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A₂	Weston-s.-Mare	W. Counties	1 4½	1 0½
A₂	Whitby ..	Yorkshire	1 4½	1 0½
A	Widnes ..	N.W. Counties	1 5½	1 1¼
A	Wigan ..	N.W. Counties	1 5½	1 1¼
B₁	Winchester ..	S. Counties	1 3	11¼
A₃	Windsor ..	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A₂	Worcester ..	Mid. Counties	1 4½	1 0½
A₃	Worksop ..	Yorkshire	4	1 0
A₁	Wrexham ..	N.W. Counties		1 0¾
A₃	Wycombe ..	S. Counties	4	1 0
B₁	YARMOUTH ..	E. Counties	1 3	11¼
B₁	Yeovil ..	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
White Portland Cement	,,	8	15	0
Thames Ballast	per Y.C.		6	3
¾″ Crushed Ballast	,,		6	9
Building Sand	,,		7	3
Washed Sand	,,		8	3
2″ Broken Brick	,,		8	0
¾″ ,, ,,	,,		10	3
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4″		6″	
		s.	d.	s.	d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾″ Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6		—
Gaskin	,,		5		—

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	8	17	6
,, Wirecuts	,,	7	17	6
,, Brindles	,,	7	0	0
,, Bullnose	,,	9	0	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	7	10	0
Luton Facings	,,	7	10	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	0	0
Headers	,,	20	10	0
Bullnose	,,	27	10	0
Double Stretchers	,,	29	10	0
Double Headers	,,	26	10	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2″ Breeze Partition Blocks	per Y.S.		1	7
2½″ ,, ,, ,,	,,		1	10
3″ ,, ,, ,,	,,		2	1
4″ ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:		s.	d.
Portland stone, Whitbed	F.C.	4	4½
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	0	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2″	F.S.	1	8
,, ,, ,, 3″	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24″ × 12″ Duchesses	per M.	28	17	6
22″ × 12″ Marchionesses	,,	24	10	0
20″ × 10″ Countesses	,,	19	5	0
18″ × 10″ Viscountesses	,,	15	10	0
18″ × 9″ Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20″ × 10″ medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1″ F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾″	Sq.		18	6
,, ⅞″	,,	1	1	6
,, 1″	,,	1	2	0
,, 1⅛″	,,	1	5	0
,, 1¼″	,,	1	10	0
Deal matchings ½″	,,		14	0
,, ¾″	,,		15	6
,, 1″	,,	1	4	0
Rough boarding ¾″	,,		16	0
,, 1″	,,		18	0
,, 1¼″	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16″			¼″			⅜″			½″		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½″	¾″	1″	1¼″	2″
Tubes, 2′-14′ long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12″-23½″ long	each	10	1/1	1/11	2/8	4/9
,, 3″-11½″ long	,,	7	9	1/3	1/8	3/-
Long screws, 12″-23½″ long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3″-11½″ long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

TUBES.	Per cent.		Per cent.
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼″	,,	8	6
,, ,, ⅜″	,,	8	3
,, ,, ½″	,,	8	0
,, ,, ⅝″	,,	7	6
,, ,, ¾″	,,	7	6
,, ,, 1″	,,	7	6
,, ,, 1¼″	,,	7	6
,, ,, 1½″	,,	7	6

		3″		4″	
		s.	d.	s.	d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		8		10
Shoes	each	2	0	3	0
Anti-splash shoes	,,	4	6	8	0
Boots	,,	3	0	4	0
Bends	,,	2	7	3	9
,, with access door	,,	—		6	3
Heads	,,	4	0	5	0
Swan-necks up to 9″ offsets	,,	3	9	6	0
Plinth bends, 4½″ to 6″	,,	3	9	5	3
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		6
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	0	6
,, drawn pipes	,,		17	6
,, soil pipe	,,	1	0	6
,, scrap	,,		11	0
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			8½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3″		4″		6″	
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	0
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2½
,, ,, 26 oz. ,, ,, ,,	,,					3½
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
⅛″ Hartley's rough rolled	,,					7
¼″ ,, wired cast	,,					10
¼″ Georgian wired cast	,,					11
¼″ Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	2	6	0
,, ordinary	,,	2	0	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
„ to reduce levels n/e 5' 0" deep and cart away	Y.C.		8	6
„ to form basement n/e 5' 0" deep and cart away	„		9	0
„ „ 10' 0" deep and cart away	„		9	6
„ „ 15' 0" deep and cart away	„		10	0
If in stiff clay . . . add	„		2	6
If in underpinning	„		4	0
Planking and strutting to sides of excavation	F.S.		1	0
„ „ to pier holes	„			5
„ „ to trenches	„			5
„ „ extra, only if left in	„			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	„	1	6	0
„ „ (4-2-1)	„	1	12	6
„ „ underpinning	„	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and grating	„	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	27	10	0
„ „ in cement	„	28	15	0
„ Stocks in cement	„	35	0	0
Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			8½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	„	6	9
¾" paving or flat	„	4	0
1" paving or flat	„	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	„	3	7	0
Do., 24" × 12"	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles.	„	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	„	4	6	6
„ „ „ „ „ „ (green)	„	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" „ „ „ „	„	1	17	6
1½" „ „ „ „	„	2	3	0
¾" × 2" fir battening for Countess slating	„		9	6
Do. for 4" gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1½" „ „ „ „ „	„		1	6
2" deal wrought rounded roll	F.R.			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼" do.	„	2	10	0
1½" do.	„	2	17	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1½" do.	„		1	9

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	9½
2" „ „	„	1	11½
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	1	7
2" „ „ „	„	3	10
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" „ „ „	„	2	8
1½" „ but moulded both sides	„	2	4
2" „ „ „	„	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	0
4½" × 3½" „ „	„	1	4
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½" deal moulded wall strings	„	2	1
1½" „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" „ „	„	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	0
Do. in flashings		1	17	6
Do. in covering to turrets, etc.	„	2	3	6
Do. in soakers	„	1	9	6
Labour to welted edge	F.R.			3½
Open copper nailing	„			3½
Close „ „	„			4½

		½"	¾"	1"	1¼"	2"	4"
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	„	6½	8	9	11	1	—
Boiler screws and unions	„	3 3	3 9	5 0	8 0	—	—
Lead traps	„	—	—	—	6 3	8 9	—
Screw down bib valves	„	6 9	9 6	11 0	—	—	—
Do. stop cocks	„	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„		9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	8
Do. vertical	„		2	1
Rough render on walls	„		1	3
Render, float and set in lime and hair	„		1	11
Render and set in Sirapite	„		2	1
Render, backing in cement and sand, and set in Keene's cement	„		2	10
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R.			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1" girth	„			1½
1" granolithic pavings	Y.S.		3	6
1½" „	„		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	„		17	6
9" × 3" „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

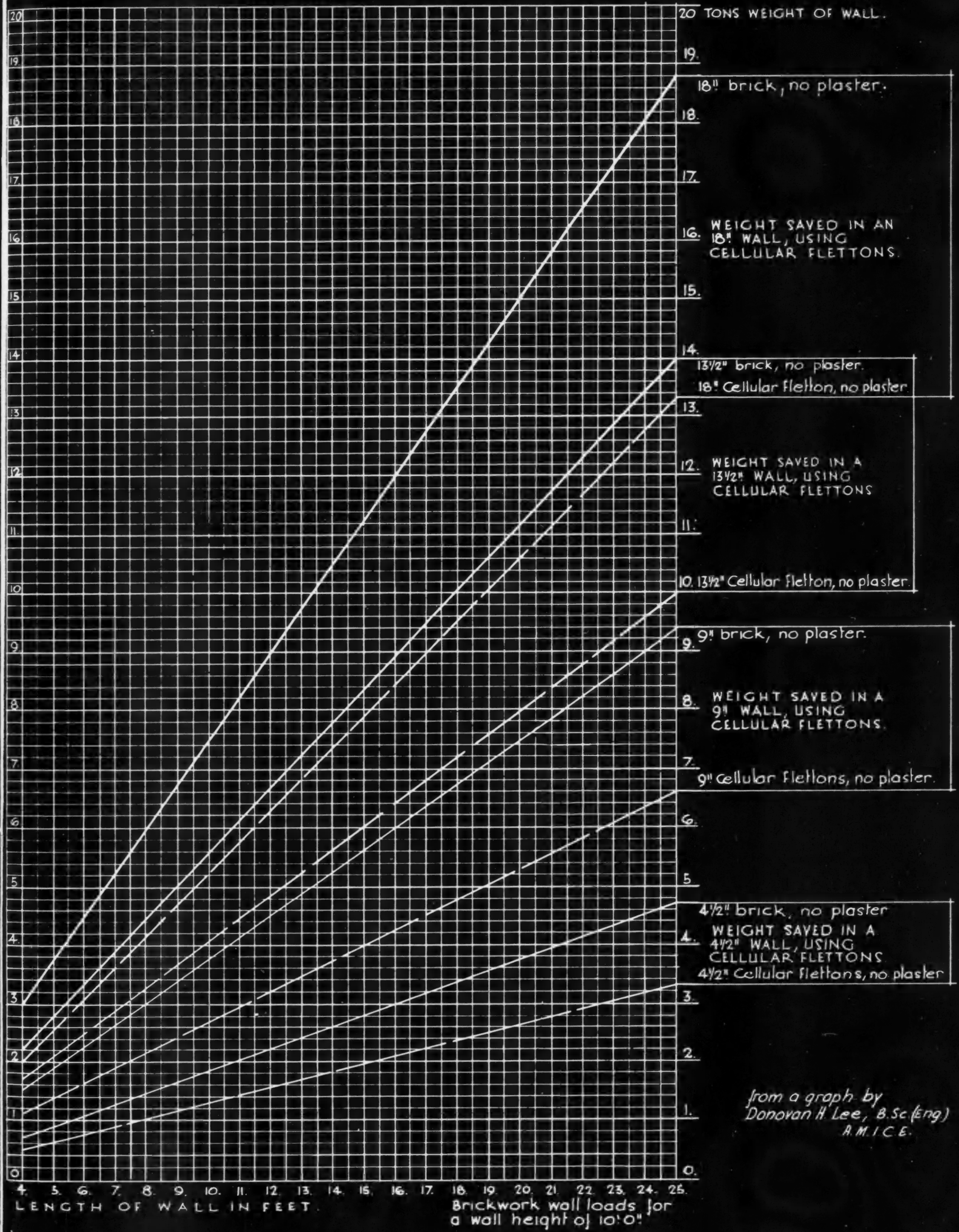
PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	„	2	9

Supplement to THE ARCHITECTS' JOURNAL for November 23, 1933 FILING REFERENCE:

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

GRAPH SHOWING COMPARATIVE WEIGHTS OF BRICK & CELLULAR FLETTON WALLS OF VARIOUS LENGTHS.



Brickwork wall loads for a wall height of 10'0".

from a graph by Donovan H. Lee, B.Sc (Eng) A.M.I.C.E.

INFORMATION SHEET : WALL LOADS OF BRICK & CELLULAR FLETTON WALLS

SIR JOHN BURNET, TAIT & LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W C1

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 55 •

BRICKS

(WALL LOADS)

Name of Product : "Phorpres"

Type Illustrated : Cellular

Name of Manufacturers : London Brick Company and Forders Ltd.

Address Africa House, Kingsway
London, W.C.2

Telephone Holborn 8282 (10 lines)

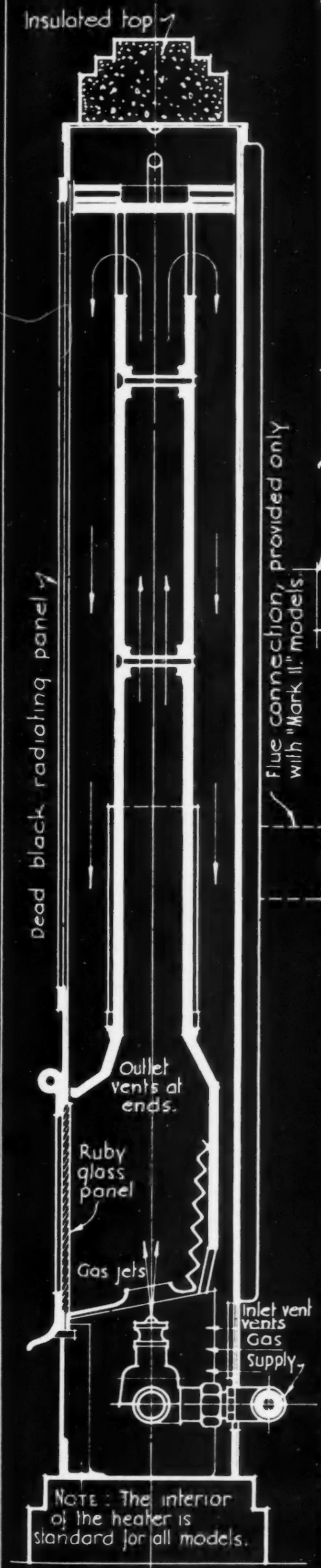
•

SINCE this is the first of a new series of Information Sheets, a word about the matter on the backs. The purpose of the back is the same as the purpose of the front—to give information. The first thing required, in the case of Sheets showing materials, is the name of the product; the second, a description of its uses; the third, the name and address of its maker. In certain Sheets—such as this one—not much description is necessary; in others technical details are required. In every case the letterpress is approved by the Editors and passed by the maker of the product in question, so that the information may be accepted as being as accurate as human care can make it.

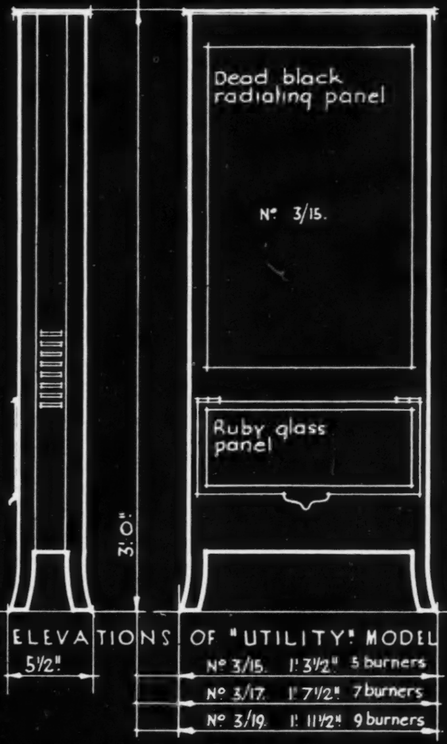
It should be made clear that the order in which these Sheets appear depends entirely upon the availability of the information. Some information is easy to get, some takes months to procure. Ideally, it would be pleasant to arrange the Sheets under certain headings and publish them in a logical sequence; but this would involve years of preparation, and the architect, in the meantime, would be deprived of their use. In practice, he can file the Sheets as they appear, under their proper sub-headings, and for this purpose a space is provided at the top of each Sheet for his own reference number. To avoid using again the numbers that have already appeared in the earlier series—which would disorganize the filing systems of those who have collected the previous Sheets—we have decided to number straight on from the last Sheet issued. This, the first of the new series, is thus Information Sheet 55. The index and its constitution is described on pages 658-659.

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION.

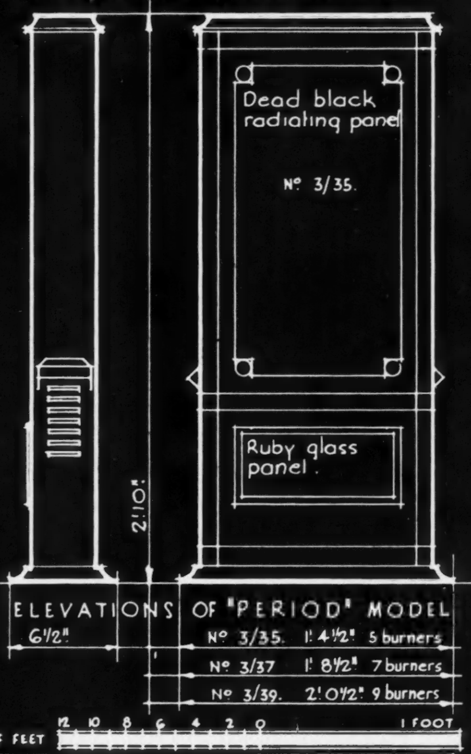
Information from Sidney Flavel & Co Ltd.


Insulated top
Dead black radiating panel
Flue connection, provided only with "Mark II." models.
Outlet vents at ends.
Ruby glass panel
Gas jets
Inlet vent
vents
Gas
Supply
NOTE: The interior of the heater is standard for all models.

SECTION SHOWING INTERIOR OF HEATER


Dead black radiating panel
Nº 3/15.
Ruby glass panel
3'. 0".
5½".
Nº 3/15. 1'. 3½" 5 burners
Nº 3/17. 1'. 7½" 7 burners
Nº 3/19. 1'. 11½" 9 burners

ELEVATIONS OF "UTILITY" MODEL


Dead black radiating panel
Nº 3/35.
Ruby glass panel.
2'. 10".
6½".
Nº 3/35. 1'. 4½" 5 burners
Nº 3/37 1'. 8½" 7 burners
Nº 3/39. 2'. 0½" 9 burners
SCALE OF FEET
12 10 8 6 4 2 0 1 FOOT

ELEVATIONS OF "PERIOD" MODEL

FINISHES:

"Moderne" & "Utility" models are finished in:

Colours, Olive green,
Chocolate,
French grey,
Chinese red.

Metal tones,
Shaded silver,
Shaded gold.

Grained wood,
Oak,
Mahogany.

"Period" model, bronze only.

NOTE: All standard models are designated "Mark I."

All models are also made with the addition of a flue connection at the back, they are then designated "Mark II."

RADIANT PANEL HEATERS:

1. require no flue,
2. are odourless,
3. are fitted with volumetric burner jets automatically compensating for variations in gas pressure,
4. have gas connections either at left hand side, right hand side or at the centre of the back
5. may be fitted with 2-way gas supply tap to give greater accuracy in the adjustment of the flame.

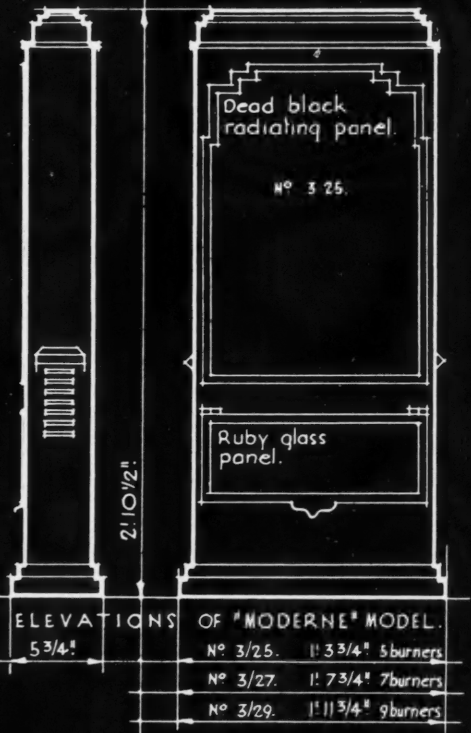
CONSUMPTION:

Model	cubic feet per hour	Hours per therm at 450 C.V. approx.
3/15., 3/25., 3/35.	8·75	25.
3/17, 3/27, 3/37.	12·25	18.
3/19., 3/29., 3/39.	15·75	14.

HEATING CAPACITIES:

Building.	Temp required	5 burner size.	7 burner size.	9 burner size.
Factories & Workshops	52°F.	1140.	1600.	2070.
Shops, Halls Churches	55°F.	1010.	1420.	1815.
Schools vestibules	58°F.	895.	1255	1710.
Offices	60°F.	840.	1180	1510.

The figures above (in cubic ft.) represent the volume of air in the building which one radiator will heat. Extra allowance should be made for exposed positions, excessive ceiling height etc.


Dead black radiating panel.
Nº 3 25.
Ruby glass panel.
2'. 10½".
5¾".
Nº 3/25. 1'. 3¾" 5 burners
Nº 3/27. 1'. 7¾" 7 burners
Nº 3/29. 1'. 11¾" 9 burners

ELEVATIONS OF "MODERNE" MODEL.

INFORMATION SHEET: FLAVEL RADIANT-PANEL GAS HEATERS.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 56 •

STOVES

Name of Product : Flavels' Leamington Stoves.

Type Illustrated : Radiant Panel Gas Heater.

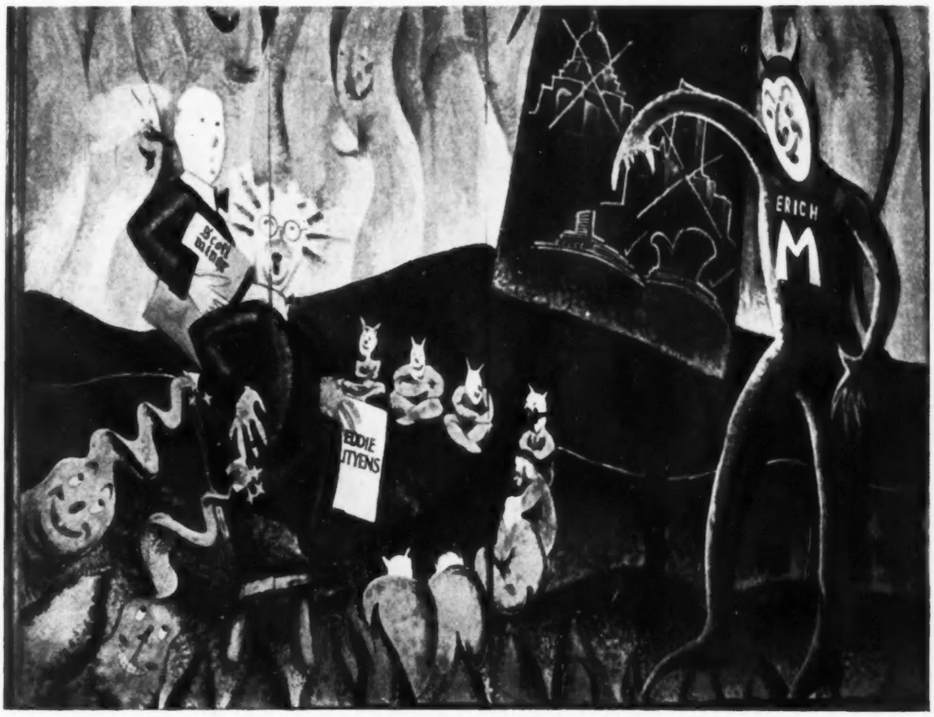
DESCRIPTION : This heater incorporates a plain black panel which emits more radiant heat than the usual columnar type radiator. Behind the heat resisting glass are volumetric jets to control the maximum consumption of gas. They can be connected from either the right or left hand side and no flue is required. The heaters are made in three sizes and three designs, one of which is hand-made so that individual designs can be produced, providing the dimensions coincide with the main body of the heater.

Further examples of Flavels' Leamington Stoves will be shown in future Sheets.

Name of Manufacturers	Sidney Flavel & Co. Ltd.
Address	Eagle Foundry, Leamington
Telephone	100 Leamington.
London Showrooms	The Welbeck Street Fireplace Galleries, 38 Welbeck Street, London, W.1
Telephone	Welbeck 2838

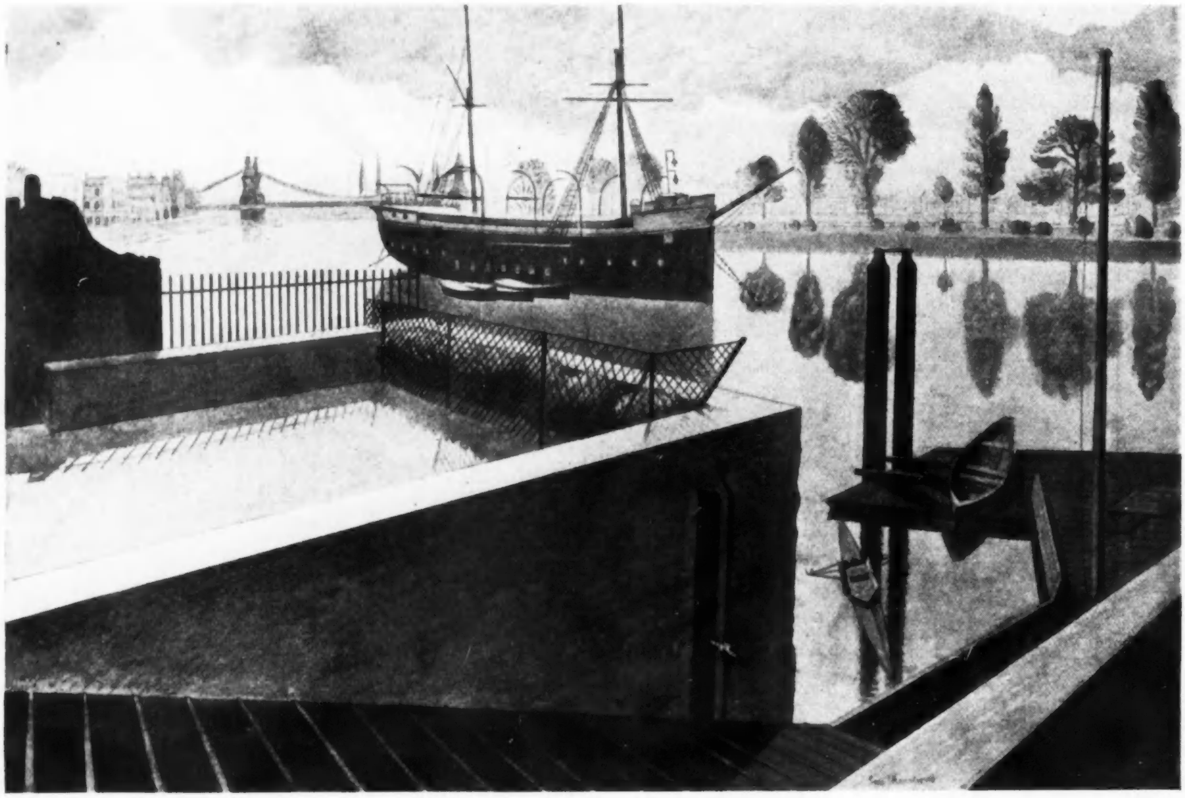
SATAN AND THE PRESIDENTS

DECORATIONS BY LIVERPOOL STUDENTS



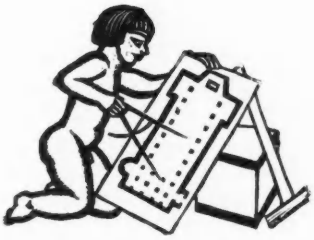
ONE of the paintings which decorated the walls of Bluecoat Chambers, Liverpool, during the recent annual dance of the students of the Liverpool School of Architecture.

The painting depicts Erich Mendelsohn, as Satan, giving a lesson to Sir Giles Gilbert Scott, R.A., President of the R.I.B.A., and Sir Edwin Lutyens, R.A., President of the I.A.A.S., on how to build modern cathedrals.



THE STORK,
HAMMERSMITH

A water-colour drawing by Eric Ravilious, from the exhibition of his work now being held at the Zwemmer gallery.



SIR HILTON YOUNG'S NEXT MOVE

THE subject of slum clearance just now occupies the front page in the popular papers and the middle page in the more dignified papers, and is today not merely as in the past as a regrettable but unavoidable evil, but as a matter for urgent reform, on the lips of everyone—even of cabinet ministers. That is all to the good ; for strongly and widely expressed public feeling is the most certain instigator of official action ; but such universal topicality also has its dangers, the chief danger being that public indignation may become exhausted before effective official action is assured—that the public, over-estimating both the local and the central governments' sense of responsibility, may assume that drastic measures must already be following such convincing declarations, and on that assumption will sit back contented that they have done their part in remedying the evil, and can now safely leave the matter in the hands of the local authorities.

If the question is once allowed to drift into a bureaucratic backwater, it will not be possible again to arouse public opinion to such an intensity of demand for a very long period.

It is essential, therefore, while the public remains in its expectant mood, that an announcement be made of the exact intentions of the local authorities regarding slum clearance for the consideration of the public to whom they are responsible. Twice during the past week the Minister of Health, once in London and again in an address to the National Housing and Town Planning Council at Malvern, has referred to the criticisms that have been levelled against his slum clearance scheme, without giving any indication that the actual ground it covers is soon to be specified. Speaking at Malvern the Minister said :—

> "Local authorities have been requested to send me their programmes for dealing in five years under the Act of 1930 with the houses in their areas that need clearance. The following is the present state of affairs as to the response to that request. There are 1,717 housing authorities including 1,604 county districts. I have received returns from 1,320. From a further 352 I have received communications about their programmes that satisfy me that they will take action.
>
> "There remain 45 housing authorities, all for county districts, that have neither submitted their programmes nor are in communication with me in such a manner as to satisfy me that they will take the action necessary. As to these, I propose a time limit. If in any case the matter has not been put right within that limit, steps will be taken to secure the holding of a public inquiry under the Act of 1930."

That may seem satisfactory so far as it goes ; but it is not enough that the Minister should enumerate the local authorities who have returned slum clearance programmes and express his confidence that the returns are adequate ; it is not even enough that he should announce his intention of dealing firmly with those who fail to make any return. A specific statement of the work that each authority proposes to put in hand must be provided, which public opinion can compare with the actual housing needs of each district and satisfy itself that the problem is being met with adequate measures.

The actual housing needs have already been estimated, both numerically and territorially, by various extra-official pronouncements—most of them implicitly critical of the adequacy of the Minister's scheme. During his address at Malvern* the Minister alluded to these criticisms. He said :—

> "Publicity has been given to a variety of conflicting estimates of the number of houses that should be cleared. They have been put forward from sources of varying and sometimes dubious authority. They resemble each other only in a common exaggeration of the size of the problem. Some run as high as 4,000,000 houses. There are about 9,500,000 houses only in the country. This estimate would thus have us pull down nearly every other house in the country as unfit for human habitation. Such statements carry their own refutation in their obvious absurdity.
>
> "A commoner figure in these estimates, but one only less exaggerated, is 1,000,000 houses. This figure has no foundation in fact. One could only get anywhere near it by lumping in all houses suitable for reconditioning as well as for clearance, adding a great many houses that are quite fit for habitation, but are not to the taste of whoever it is that is making the estimate."

The estimates he refers to are presumably those given in Sir E. D. Simon's recent book, in *The Evening Standard's* current slum campaign (which it may not be out of place to commend as an admirable piece of constructive propaganda, free from the sensationalism and credit-mongering that often ruins such efforts in the public press) and by ourselves.

All these do certainly recommend a bolder approach than does the Minister, and the figures we gave suggest that the bolder course is the wise one ; but we should like to make it clear to the Minister and to everyone else that we are not placing ourselves in opposition to his Department. We take no political sides, nor do we wish to attack the National Government.

Our sole function is the professional or technical one of making a definite estimate, based on practical investigation, of what housing this country requires. Later it may be useful to compare the Minister's programme with the actual housing requirements—with ascertained facts, it should be emphasized, and not with personal fancies. Meanwhile, the publication by the Minister of the detailed programmes of the local authorities is the next essential stage, and would do much, no doubt, to silence the criticisms of ill-informed persons of which the Minister complains.

---

* Further extracts from this address are printed on page 709.

The Architects' Journal
9 Queen Anne's Gate
Westminster, S.W. 1
Telephones: Victoria
9 2 1 2 - 7
Telegrams:
Buildable
Parl
London

NOTES & TOPICS

PLANNING FOR TRAFFIC

IS a city made for the enjoyment of man or for the passage of traffic ? It is good to see that early protests are being made against the proposal of the London Passenger Transport Board to run trolley-buses through Bedford Square.

*

The Architectural Association, I learn, have already called a council meeting to discuss the subject, and are in touch with other occupiers of the square to further a combined petition.

*

It is disturbing even to imagine how Leverton's masterpiece (one of our few uninterrupted examples of stately planning) would look with its elevations defaced by overhead wires and with the plane trees in its gardens emulated by those clumsy standards.

*

The proposal is equally disturbing as a possible forerunner of other piecemeal developments where planning should come first.

*

Somebody, in defending it, is bound to say that " traffic is the life blood of a city." Remarks of that kind are inescapable today in the world of words that is inhabited by our spiritual and temporal masters. Very well then : London is suffering from blood pressure.

*

It wants a bit of quiet life, and Bedford Square is one of the places where it can be got.

*

Surely the London Passenger Transport Board is not going to acquire the disturbing habit of blandly proposing impossibly savage things. Has it got a plan for traffic ; can't it be published, and when published related to human needs and architectural decencies ?

THE GIRDER

The photograph of that giant girder for the new R.I.B.A. building lying across Portland Place, which appeared in last week's issue of THE ARCHITECTS' JOURNAL, and elsewhere for all I know—why did it appear ?

*

Was it intended, by comparison in terms of weight, size or obstruction to impress the ignorant with a sense of the importance of the R.I.B.A. ?

*

Quite certainly it was big. It was very heavy. And it obstructed the flow of traffic in Portland Place for the better part of a working day. But is that good advertising for architects, who should be the super technicians of modern society ?

*

I remember that there was a similar girder at the Cumberland Hotel that eventually sunk into the mud, and caused a great deal of trouble. Must we copy ?

*

Besides, a building of a semi-domestic character should surely have no place for monstrous beams that weigh 60 tons. Steelwork on that scale is evidence only too often of planning in uneconomic units.

*

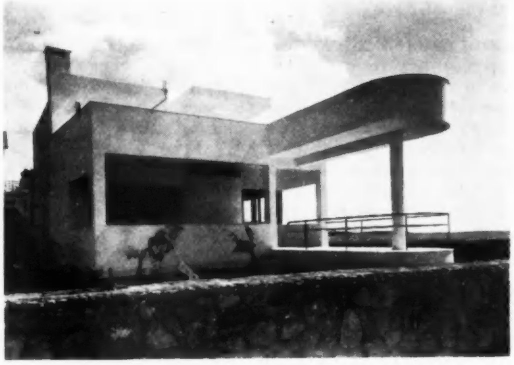
I would not suggest that that is the case with the R.I.B.A. girder ; but it seems unwise, since people are so apt to jump to unkind conclusions, to parade such dangerous evidence before the public.

THE CHURCH GOES CHROMIUM

I came across a paragraph on church repair in a deanery magazine recently which may, if it really reflects contemporary thought among churchmen, mark the beginning of unusual developments in interior architecture in churches.

*

" When church interior repair is needed, are we going on in the same old way, with subfusc colours, draperies that hold the dirt, glass that keeps out the light, seats uncomfortable to sit in, and cocoa matting that suffocates the congregation with dust ?" Many laymen have asked



Nautical character in a seaside villa. This house near Athens is further illustrated on pages 706-707.

Frank Pick, vice-chairman of "London Transport," who is to preside at the annual dinner of the Design and Industries Association, to be held in London on December 1.

that question, but few laymen have dared to suggest this : "Why not walls of white washable paint, chairs of stainless steel with scarlet seats and backs, screen (if not ancient) of glossy black, pointed with gold, and six tall candles on its parapet flanking a gilded crucifix ? "

*

After that there were a few heartening comments about that abomination of desolation, pitch pine. The paragraph ended with the advice : "Take away all the old faded frippery, have a bonfire, and get a young and thoroughly modern architect to design you an altar and sanctuary, in which everything will depend on *proportion.* He may have one help only—*colour.*"

YE OLDE BEVERLEY NICHOLS

Mr. Beverley Nichols has, quite unconsciously, written *such* a charming guide book to the art of keeping a house well out of this horrid century ! It displays in sentimental detail, chapter by chapter, the budding and blossoming of ye olde worlde taste. It is called *A Thatched Roof.*

*

After reading it one is at least able to understand the hopelessness of trying to get good contemporary design into minds that are closed to everything modern. There are a few falsetto squeaks in the book, when its author fears an accusation of old-worldliness. But the book reeks of it. In spite of its wrappings of romantic drivel, the house described sounds surprisingly comfortable.

SMOKE SCREEN

It is time, remembering that great battle we fought over Battersea Power Station, that we enquired into the efficiency of the smoke consuming plant installed there.

*

Going out from Victoria one day I was delighted to mark a faint white steam-like cloud issuing from those mighty chimneys at Battersea.

*

But came another day, as I walked by the river, and from these same stacks there poured a great black cloud, drifting and spreading on heavy air over the lovely expanses of Battersea Park towards the densely populated areas beyond.

*

Now which are we to have ? Is government action in this vital matter of smoke abatement to be confined to this one station ? And is this to be efficient ?

*

It is still of importance to us, is it not ? Are, for instance the ratepayers of Holborn always to continue to pay both for the expensive baths wherewith its citizens are cleaned, and the foul bath furnace chimney that dirties them the moment they step outside that bathing establishment ? The double bill of costs goes on. How and when are we going to take steps to reduce it ?

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, November 30

L.C.C. GEFFRYE MUSEUM. At *Kingsland Road, Shoreditch, E.2.* "The Stone and Wood Carvings of Worcester Cathedral." By Philip Johnson, F.S.A., F.R.I.B.A. 7.30 *p.m.*

ROYAL COLLEGE OF ART. In the *North Court, Victoria and Albert Museum.* Exhibition of works by the Sketch Club. Until December 16.

EXHIBITION OF MODERN LIVING. At *Whiteley's, Queen's Road, W.2.*

Friday, December 1

ROYAL SANITARY INSTITUTE. At the *Municipal Annexe, Dale Street, Liverpool.* Discussion on "Housing and Slum Clearance," to be opened by Dr. W. M. Frazer. 5 *p.m.*

DESIGN AND INDUSTRIES ASSOCIATION. At the *Café Royal, Regent Street, W.* Annual dinner.

ARCHITECTURAL ASSOCIATION. At 34-36 *Bedford Square, W.C.1.* Exhibition of photographs taken on the A.A. Excursion to Italy, 1933. Until December 9. 10 *a.m. to* 10 *p.m.*

Saturday, December 2

Sunrise 7.44 a.m. Sunset 3.54 p.m.

Monday, December 4

R.I.B.A. At 9 *Conduit Street, W.1.* "Contemporary London Buildings." By Charles Marriott, HON.A.R.I.B.A. Presentation of the London Architecture Medal and Diploma, 1932. 8 *p.m.*

THE ARCHITECTURE CLUB. At 34-36 *Bedford Square, W.C.1.* Discussion "Are we Tinkering with the Slum Problem ?" to be opened by Frederic Towndrow, A.R.I.B.A. Supper 7.30 *p.m.*, Discussion 8.30 *p.m.*

CHARTERED SURVEYORS' INSTITUTION. At 12 *Great George Street, S.W.1.* "The Law relating to Electricity Supply." By H. F. Bidder, D.S.O., B.A. 8 *p.m.*

Tuesday, December 5

CHADWICK PUBLIC LECTURES. At the *Institution of Mechanical Engineers, Storey's Gate, S.W.1.* "Rural Sanitation." By J. H. Coste, F.I.C., F.INST.P. 8 *p.m.*

MORLEY COLLEGE. At 61 *Westminster Bridge Road, S.E.1.* "The Contemporary Architecture of Great Britain." By Frederic Towndrow, A.R.I.B.A. 8 *p.m.*

Wednesday, December 6

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the *Home Office Industrial Museum, Horseferry Road, S.W.1.* "Unit Heaters." By W. P. Ollett. 7 *p.m.*

NEWS

◆

POINTS FROM THIS ISSUE

Trolley-buses in Bedford Square *686*

The replanning of Moscow is to take place in stages. The plan for the first stage, prepared by several architects, has already been approved *688*

" The plea for a Royal Commission into the question of Housing, Town Planning and Slum Clearance, made some years ago might, perhaps, be more favourably considered, under present circumstances, if it was renewed " *696*

The wealthy client is going to be scarce in the future. He is scarce now. He will ask for the adaptation and modernization of existing buildings instead of initiating fresh work *701*

The man of business is only just beginning to realize that the designer is a specialist *701*

◆

NEW CHURCH HOUSE

A private Bill is to come before Parliament in the near future to enable the erection, by the Church of England, of a new Church House in Dean's Yard, Westminster.

The new building will contain two meeting halls, in one of which the Church Assembly will meet; a public meeting hall: accommodation for committees and church and missionary organizations; shops and a restaurant; and a residential club for members.

Sir Herbert Baker, R.A., is the architect.

ADVISORY PLAN OF BROADWAY

An advisory plan of Broadway, Worcestershire, prepared for the residents and traders by Mr. G. A. Jellicoe, A.R.I.B.A., A.I.L.A., is to be presented at a meeting to be held at Lifford Hall, Broadway, on December 6.

One of the main features of the plan provides that the whole of the village street should be scheduled as a place of historic and architectural interest. Within this area new work should be reduced to a minimum, and its design should be guided chiefly by inconspicuousness.

" A POSITIVE BAN ON PRODUCTIVE INVESTMENT."

The arguments put forward by the Special Committee for Public Relations of the Building Industries National Council for the resumption of postponed schemes of public work have received warm support in the leading article in last Saturday's " Economist."

The article, discussing the incipient recovery, decries the " almost complete failure of statesmen to take any positive remedial measures " and their apparent reliance on the " negative advantages of stability," and concludes that this country has made a modest recovery " more by good luck than good management." The general position is that " the crisis is over in this country, but the depression is not."

From this the writer draws two morals.

" *In the first place*, the persistence of depression, in spite of the success of cheap money, is an even more pressing argument for positive measures of expansion." *Cheap and abundant money is " not the only method of getting purchasing power into consumers' hands;* and as long as there is idle capital and idle labour available there is no sound reason against using all those other methods which are not objectionable in themselves." *This view was put forward in these notes on October 19.*

" *The Economist* " *goes on to say that* " neither this nor any other Government could have any reason or excuse for delaying any longer in adopting an expansionist policy at home. *It is absurd to pretend that public works schemes are not being undertaken because none exist; for the instance of the Elephant and Castle scheme . . . show that* the Government is still exercising a positive ban on productive investment of this kind. *And, above all, in persisting in its obstinate refusal to adopt an effectively co-ordinated housing and slum-clearance policy the Government is ignoring at one and the same time the advice of housing experts, the crying need of the slum-dwellers, and* the demand of almost all expert economic opinion for positive monetary expansion."

The second moral drawn by "The Economist" is that " the passing away of the crisis has removed the dangers which an expansive policy might otherwise have entailed." " When a Government's financial credit is high, and prices and production are definitely on the turn, there is good reason to expect such measures to succeed." *This same argument was put in the note on October 19.*

The general conclusion drawn by "The Economist" is that " even if there were valid arguments against a forward policy in 1931, they are certainly invalid today."

REPLANNING KENSINGTON

In co-operation with the R.I.B.A. and the London Society, a plan of part of Kensington is being prepared by Mr. James Burford, A.R.I.B.A. In the suggested plan commercial and industrial sites are carefully segregated from residential ones. It is proposed that new accommodation should take the form of blocks of flats, each block with a communal garden and a nursery school. It is interesting to note that while approximately 7,000 families are at present housed in the Notting Dale area, under the replanning scheme, approximately 7,500 could be housed with no overcrowding and with plenty of open spaces.

CANADIAN DEGREE FOR SIR RAYMOND UNWIN

Sir Raymond Unwin, PP.R.I.B.A., who is touring the United States and Canada, received, on November 20, the honorary degree of Doctor of Architecture from Toronto University.

REPLANNING OF MOSCOW

The replanning of Moscow is to take place in stages. The plan for the first stage has already been approved. It includes the replanning and architectural reformation of the following main roads: The new Ilyitch Avenue, running from Sverdlovsk Square to the Palace of Soviets and thence to the Gorky Park of Culture and Rest, also Gorky Street and the Bolshaya Dmitrovka. The planning of the above roads have been entrusted to the following architects: Ilyitch Avenue—B. M. Iofan; Gorky Street—Professor Chernishevsky; Bolshaya Dmitrovka—M. Kondratev.

The planning of the central squares and the embankments also comes within the work of the first stage.

RESTORATION OF 17TH CENTURY BUILDING IN VORONEZH

The Museum authorities of Voronezh, Russia, have decided to restore one of the oldest buildings in the city—the Yacht Club—which dates back to the time of Peter the Great (1698-1707). The work is to be started early in April, under the direction of M. Katonin, the Moscow architect. The building was originally designed as a warehouse for shipbuilding material. It was destroyed by fire in 1748, restored at the end of the eighteenth century and again used as a warehouse. In 1870, on the initiative of the Voronezh nobility, the building was turned into a yacht club and existed as such up to 1915.

KENSINGTON HOUSING ASSOCIATION

The eighth annual general meeting of the Kensington Housing Association was held on Tuesday last, when a debate took place between Sir Ernest Simon and Mr. J. A. L. Duncan, M.P. for North Kensington, on the subject of " Will the attack on the slums fail? "

EDINBURGH ARCHITECTURAL ASSOCIATION

Mr. James Arnott, F.R.I.B.A., in his presidential address to the above Association on November 22, referred to the various activities which were likely to affect the appearance of our county and towns, and said that the manner in which they were to be handled gave concern. Was it to be planning or disintegration? Was it not

The R.I.B.A. London Architecture Medal Building for 1932: Lloyds Bank, Lombard Street elevation. At the next meeting of the R.I.B.A., on December 4, the Medal and Diploma will be presented to the architects, Sir John Burnet and Partners and Campbell Jones, Sons and Smithers.

a matter to which the architectural profession could contribute to a greater extent than hitherto? Planning was an architect's job, whether the arranging of the units of a house or a community.

NEW MUNICIPAL BANK, BIRMINGHAM

On Monday last, November 27, Prince George opened the new Municipal Bank, Broad Street, Birmingham. Mr. T. Cecil Howitt, F.R.I.B.A. is the architect.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

Mr. G. L. Taylor, a winner of one of the above Society's travelling studentships, gave an illustrated lecture on his experiences at a meeting of the Students' Union, held at the Leeds College of Art on November 23. Mr. J. S. Allen, F.R.I.B.A., the new Principal of the Leeds School of Architecture, presided.

MR. OWNER v. MR. TENANT

The current issue of *The Week End Review* contains the first of two articles by Mr. M. I. Michaels entitled, "Mr. Owner *v.* Mr. Tenant." The author is Assistant Secretary of the New Survey of London Life and Labour, and the purpose of the articles is "to answer objectively questions which have been raised about the true effects of the Building Society movement on post-war housing."

The first article describes the operations of the Building Societies and the reasons for their rapid advance since the war. The author says: "A comparison of the cost of buying *versus* renting is difficult to make. One can only compare the cost of renting a flat against buying a house. On the whole, if the repayments are spread over a period of fifteen to twenty years, the annual payment does not greatly exceed the estimated rentable value of similar accommodation. Including the estimated cost of repairs and the possibility of increased fares to the place of work, the excess would be increased. To many people the advantages of a semi-detached modern Tudor mansion, complete with garden, compared with flats in a converted house, outweigh the extra cost incurred."

In regard to the rates of interest charged on advances, the author is of the opinion that the semi-monopolistic position of the societies enabled them to charge an unduly high figure, until the rates were lowered last year, partly as a result of a Press campaign. "In 1931 the average rate of interest charged to borrowers calculated on the mean mortgage balances outstanding was 5.87 per cent. For the thirty-four largest societies the average rate was actually 5·94 per cent. In the same year the average rate of interest on share capital was 4·62 per cent., tax free, a rate higher than that earned by insurance companies, and now substantially in excess of that paid on Government securities."

MANCHESTER UNIVERSITY

Sir Ernest Simon, M.P., speaking at a recent meeting of the Manchester University Court, referred to the inadequacy of the accommodation of the University. He said that when the buildings were erected 60 years ago, they were no doubt up to the best standard of those days.

Definite extensions and additions were necessary to bring the buildings up to date, and they needed £200,000 for this purpose. They did not contemplate any appeal at present.

FORTHCOMING DINNERS

The annual dinner of the Quantity Surveyor Members of the Chartered Surveryors' Institution is to be held at the Hotel Victoria, Northumberland Avenue, W.C.2, on Wednesday, December 13, at 7.30 p.m.

The seventh annual dinner of the Faculty of Architects and Surveyors is to be held at the Hotel Metropole, Northumberland Avenue, W.C.2, on Friday, December 8, at 7.15 p.m.

LECTURE AT HASTINGS

A public lecture entitled "Truth in Construction" was given by Mr. R. Goulburn Lovell, secretary of the South-Eastern Society of Architects, on November 17, at the Hastings School of Art.* During the lecture Mr. Lovell said:—

"The three principles of construction employed by man since he learnt to build, are the lintel, the arch and the monolithic. The closer the separate character of these three principles is adhered to, the more truth there is in the construction of a building. This truth has existed and will exist however much the question of style may be disputed. The new President of the Royal Institute has explained that in the time of his grandfather—Sir Gilbert Scott—the battle between the Gothic style and Classic style was as fierce as the battle today between the Traditional and the Modern schools.

"The Gothic revival of Pugin's days and his splendid advocacy of it, so influenced Sir Gilbert Scott some 60 years ago that he wrote 'I was from that moment a new man, old things had become new, or rather modernism had passed from me and every aspiration had become mediæval.' His grandson, Sir Giles Scott, reviews today's battle between *extreme* Traditionalism and *extreme* Modernism and says he believes that the present battle of the styles will serve a useful purpose in cancelling out each of these extremes.

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* See letter from Mr. Lovell on page 696.

"During the last century, when industrialism sprang into vigour, 90 per cent. of the factories in England were built by men who were not architects. Gaunt ugliness remains today and draws our attentions to the slums which surround them. The tide has now turned. We have only to consider the factories built by competent architects to realize that there can be as much beauty and truth in the construction in a factory, as in a temple.

"Design should grow out of the plan and the best planners are the best designers. We do not want revolution in architecture, but evolution, resulting from the new materials with which science has provided us."

The lecture was the fifth of a course of lectures on architectural construction given in connection with the Department of Architecture of the Hastings School of Art.

THE LATE R. ANNING BELL, R.A.

We regret to record the death of Mr. Robert Anning Bell. He was widely known as a painter and modeller, and as a worker in stained glass and mosaic.

He was born in 1863, and studied at the Westminster School of Art, R.A. Schools and in Italy. He was elected an A.R.A. in 1914; and an R.A. in 1922.

COMPETITION

NEWS

PROPOSED TOWN HALL FOR DAGENHAM

The Dagenham (Essex) Urban District Council have been in communication with the R.I.B.A. regarding an architectural competition for a proposed town hall at Dagenham. It has not yet been definitely decided whether a town hall shall be built, as the Council have been unable to obtain sanction to apply for a loan from the Ministry of Health. A deputation has attended at the Ministry, however, and details of the accommodation required are to be drawn up as a basis of application for loan sanction.

BEXHILL COMPETITION

We have received several enquiries regarding the cost of the proposed entertainments hall, Bexhill. In the "answers to questions," just issued, mention is made of an alteration, but no sum is given. We therefore reprint the following paragraph from our issue for November 2:

"At a meeting of the Bexhill Corporation, in connection with the Coastguard site competition, it was stated that the Council is prepared to consider an expenditure of £60,000 for the proposed work."

Competitions Open

December 2.—Mr. J. P. Turner, J.P., of Cardiff, invites architects and town planners to submit designs for the lay-out of a building estate of about seven acres at Penylan Hill, Cardiff. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £100, £50 and £25. Conditions, etc., obtainable from E. Turner and Sons, Ltd. Penarth Road, Cardiff. Deposit £1 1s.

December 15.—Sending-in Day. Messrs. Jenson and Nicholson invite designs for the decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.: and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1.

December 29.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor: Thomas S. Tait, F.R.I.B.A. Premiums: £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1. The conditions were reviewed in our issue for September 28.

January 13, 1934.—Sending-in Day. Proposed Public Elementary School, to be erected on a site in Han Lane, Coventry, for the City of Coventry Local Education Committee. Open to architects whose offices are situate within the City of Coventry on November 1, 1933. Assessor: C. E. Bunch, F.R.I.B.A. Premiums: £100, £50 and £30. Last day for questions was November 18. Designs are to be submitted to Frank H. Harrod, Director of Education, The Council House, Coventry, by January 13.

January 15, 1934.—Designs of electrical kitchens suitable for (1) a house (or flat) valued at £300-£400 (net building cost without land), and (2) a house (or flat) valued at £800-£900 (net building cost without land), for the British Electrical Development Association. Assessors: R. S. Downe, M.I.E.E., Francis Lorne, F.R.I.B.A., Lionel G. Pearson, F.R.I.B.A., A. C. Cramb, M.I.E.E., M.I.M.E., and Miss Maughan, M.SC. Premiums: £50 and £25, for each section. Designs are to be sent to the Association at 2 Savoy Hill, W.C.2, not later than January 15, 1934. Conditions, etc., are now obtainable.

No date.—The Stoke-on-Trent City Council invites competitive designs for a proposed Mental Colony to accommodate 500 patients. The assessor is to be appointed by the President of the R.I.B.A. Premium £300. Copies of the proposed scheme and conditions of the competition are obtainable from E. B. Sharpley, Town Clerk, Town Hall, Stoke-on-Trent.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor: H. S. Goodhart-Rendel, F.R.I.B.A. Premiums: £150, £100 and £50. Conditions have not yet been drawn up.

Proposed Extensions to the Town Hall, Swindon. Assessor: Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Limited to architects practising in Northern Ireland. Assessor: R. S. Wilshere, A.R.I.B.A.

Proposed Town Hall and Municipal Buildings, Stoke Newington. Assessor: Sir Edwin Lutyens, R.A. Conditions have not yet been drawn up.

R. I. B. A.

THE NEXT MEETING

At the next meeting of the Institute, to be held on Monday next, December 4, at 8 p.m., Sir Giles Gilbert Scott, R.A., will present the R.I.B.A. Medal and Diploma for a London building completed between 1930 and 1932 to Messrs. Sir John Burnet and Partners and Messrs. Campbell Jones, Sons and Smithers, the architects for Lloyds Bank Headquarters, Lombard Street Elevation. The presentation will be preceded by a paper on "Contemporary London Buildings," by Mr. Charles Marriott, HON.A.R.I.B.A.

COUNCIL MEETING

Following are some notes from a recent meeting of the Council of the Institute:

The Fellowship: The Council, by a unanimous vote, elected the following architects to the Fellowship under the powers defined in the Supplemental Charter of 1925: Messrs. Jack Francis Hennessy (Sydney) and W. J. W. Forbes (Perth, W. Australia).

Election of Students: The following probationers were elected as students of the R.I.B.A.: R. G. Bell (Special Exemption); D. M. Dodd (University of Liverpool); M. J. Goodchild (Special Exemption); C. J. Jerram (Northern Polytechnic); S. E. Malins (Birmingham School of Architecture); J. H. Napper (University of Manchester); (Miss) P. J. Owen (Architectural Association); (Miss) M. Roberts (Architectural Association); H. P. Shepherd (Architectural Association); and E. J. Steen (Armstrong College, Newcastle-on-Tyne).

PRIZES FOR PUBLIC AND SECONDARY SCHOOLS, 1933

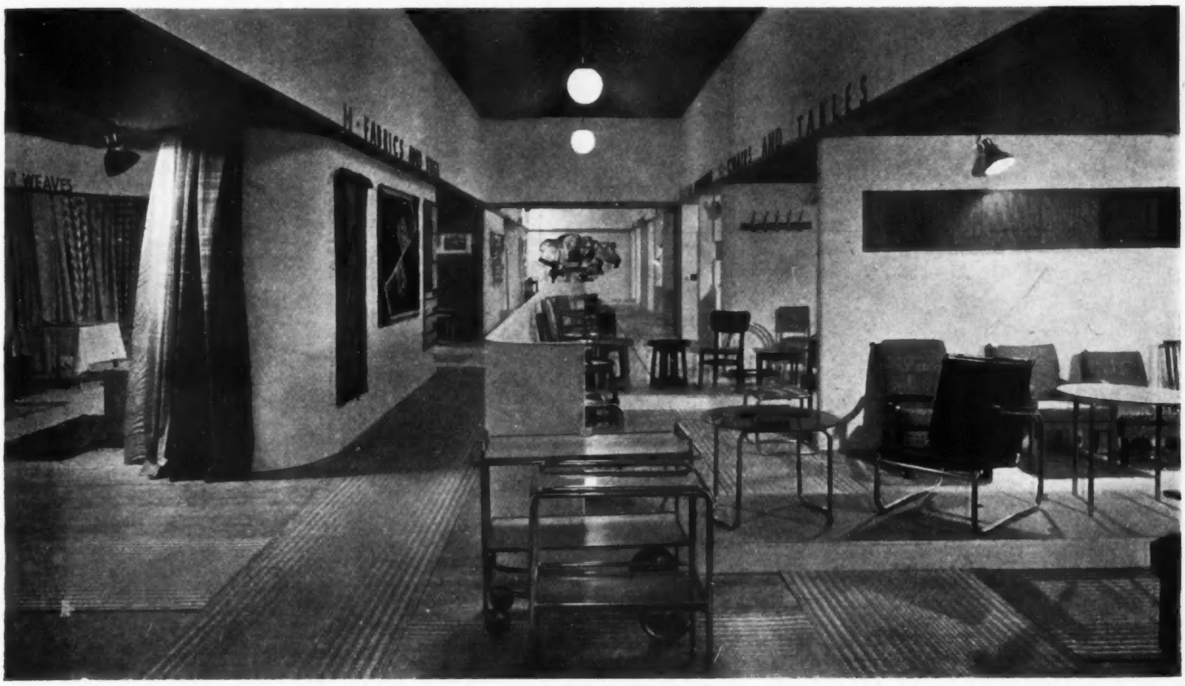
The Board of Architectural Education announce that the following awards have been made:—

Prizes for Essays: £2 2s. to B. W. Watkin, of Bishop's Stortford College, for his essay on "The Royal Hospital, Greenwich." £1 1s. to Miss Margaret L. Harvey, of George Dixon Secondary School for Girls, Birmingham, for her essay on "The Church of St. John the Baptist, Halesowen, Worcestershire." £1 1s. to Geoffrey Robson, of The Grammar School, Dudley, Worcester, for his essay on "Malvern Priory Church." £1 1s. to Bruce Martin, of Surbiton County School, for his essay on "Hampton Court Palace."

Prizes for Sketches: £2 2s. to Geoffrey Robson, of the Grammar School, Dudley, Worcester, for his drawings of St. Peter's, Wolverhampton. £1 1s. to John Agnew, of Rock Ferry High School for Boys, for his drawings of Liver Buildings, Pierhead, Liverpool. £1 1s. to M. A. J. Farey, of Tonbridge School, for his miscellaneous sketches. £1 1s. to H. H. Knopp, of the Polytechnic Secondary School, Regent Street, London, W.1, for his drawing of St. John's Church, Pinner.

EXHIBITION OF MODERN LIVING

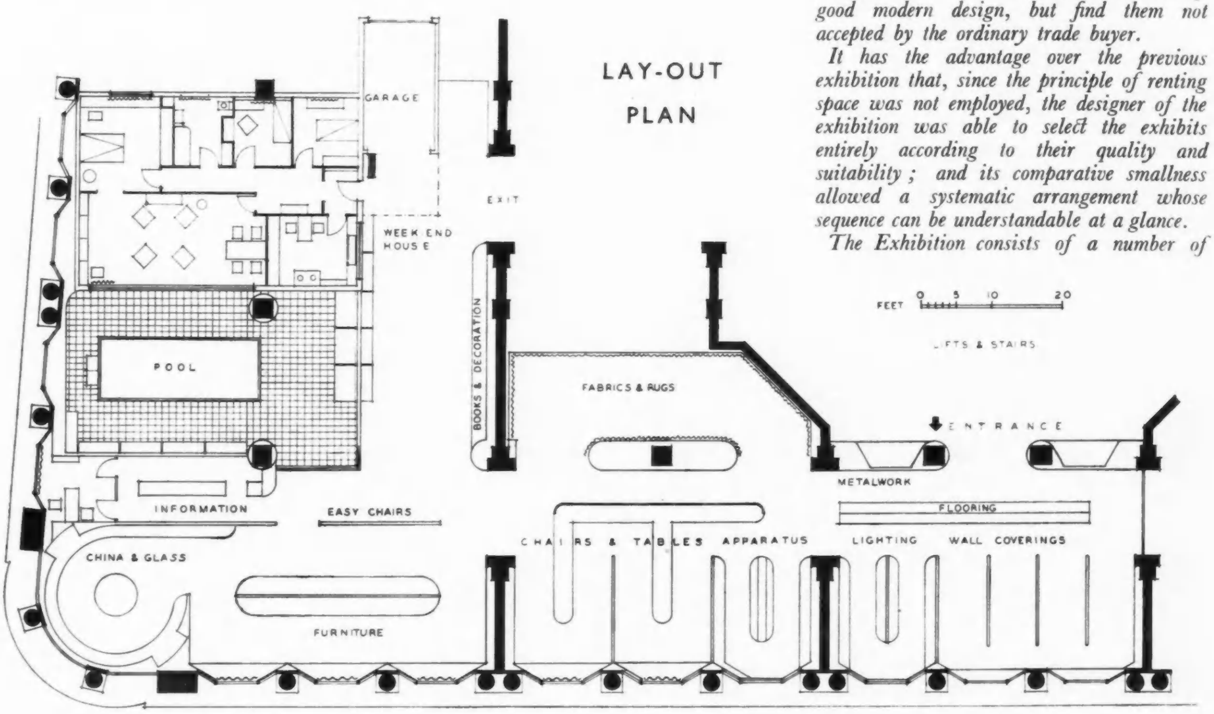
AT WHITELEY'S, QUEEN'S ROAD, W.



THE aim of this Exhibition, recently opened, is to provide a necessary and permanent means of distributing to the buying public, through the usual retail channels, goods of sensible design whose existence they may have become aware of as the result of such temporary exhibitions as the recent Exhibition of Industrial Art at Dorland Hall; and to provide an outlet for such manufacturers as have produced articles of good modern design, but find them not accepted by the ordinary trade buyer.

It has the advantage over the previous exhibition that, since the principle of renting space was not employed, the designer of the exhibition was able to select the exhibits entirely according to their quality and suitability; and its comparative smallness allowed a systematic arrangement whose sequence can be understandable at a glance.

The Exhibition consists of a number of


LAY-OUT PLAN
GARAGE
EXIT
WEEK END HOUSE
FEET 0 5 10 20
LIFTS & STAIRS
POOL
BOOKS & DECORATION
FABRICS & RUGS
ENTRANCE
METALWORK
INFORMATION
EASY CHAIRS
FLOORING
CHINA & GLASS
CHAIRS & TABLES
APPARATUS
LIGHTING
WALL COVERINGS
FURNITURE

SELECTED AND DISPLAYED BY SERGE CHERMAYEFF

EXHIBITION OF

sections, labelled alphabetically and leading progressively from floor and wall finishes suitable for domestic use, through the various stages of furnishing and equipment to the final details of decoration.

The illustrations on the pages following show both its appearance and the sequence of the sections under which it is arranged. Brief notes are also given of the ground covered under each section.

The Exhibition is arranged in the following sections :

A. FLOORING. *Outdoor and indoor flooring materials : marble, synthetic, jointless wood, cork, rubber, tiles and carpet materials, arranged in sloping panels near floor level. See Fig. 2.*

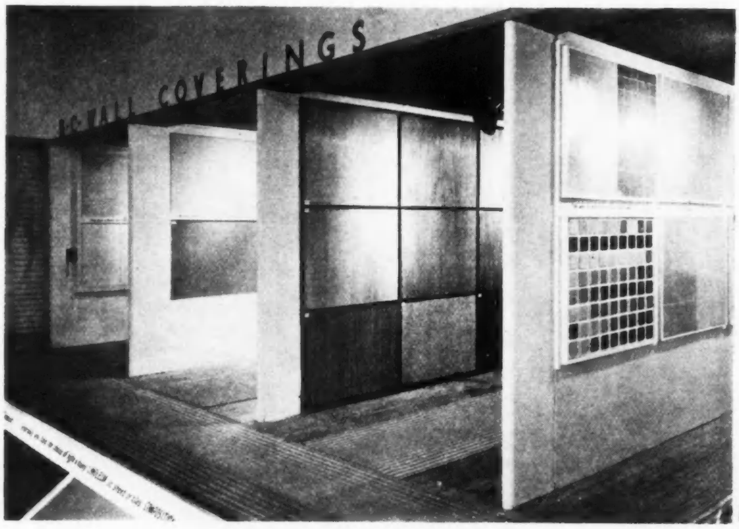
B. WALL COVERINGS. *Plaster, building board, wallpaper, plywood, tiles, marble, synthetic, stone and glass. See Fig. 1.*

D. LIGHTING. *Direct, semi-direct and indirect electric fittings for ceiling, wall and shelf. See Fig. 3.*

E. METAL. *Windows, door furniture, metal tubing in various finishes.*

F. HEATING AND APPARATUS. *Electric, gas, steam and water heaters ; electric irons, toasters, refrigerators and clocks ; thermos flasks ; gramophones ; wireless sets ; typewriters. See Fig. 4.*

G. CHAIRS AND TABLES. *Bent wood furniture ; steel tube furniture ; easy chairs.*



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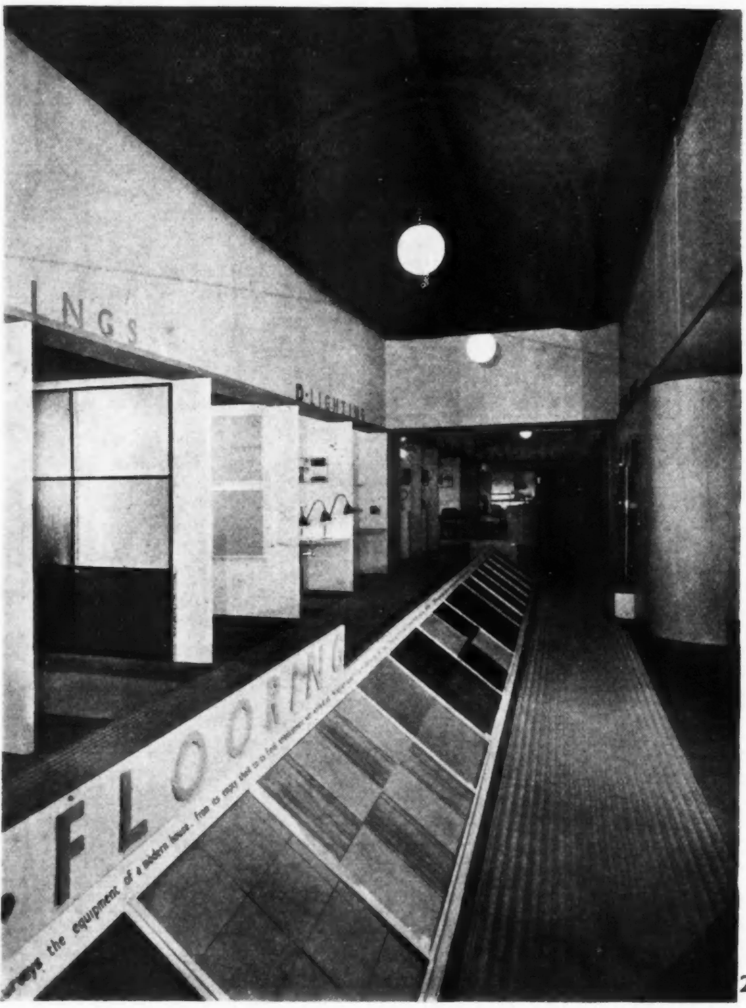

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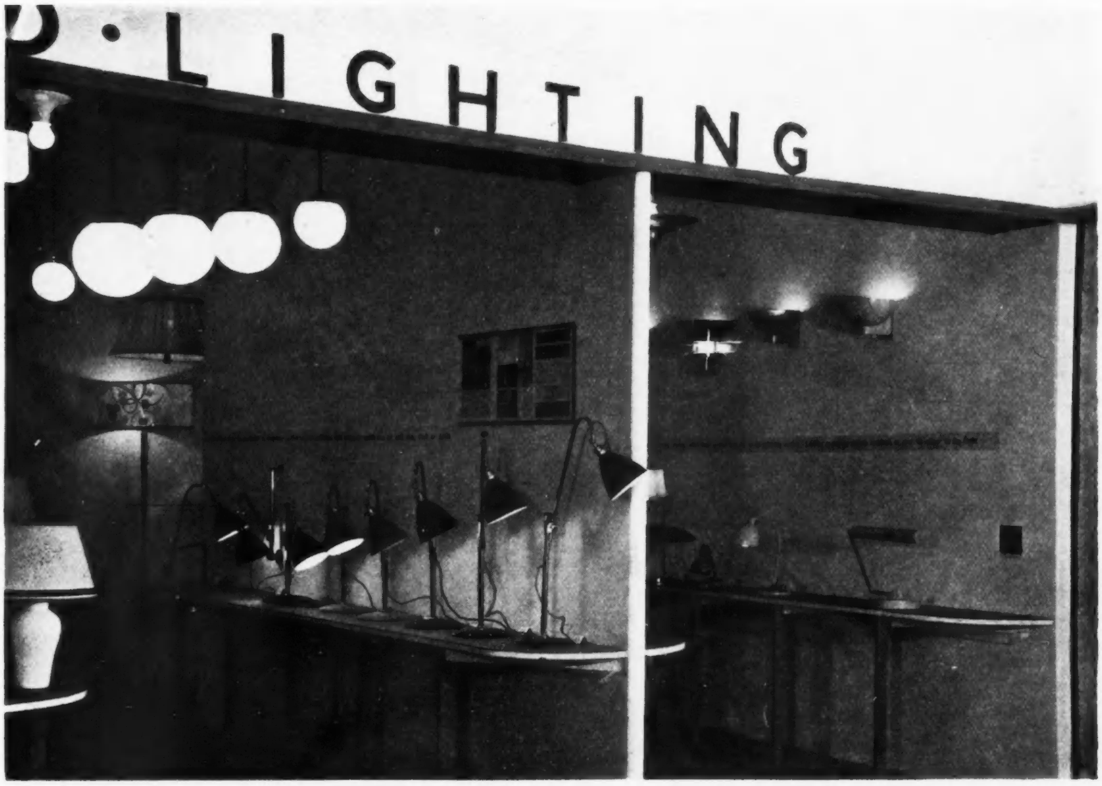
MODERN LIVING, AT WHITELEY'S



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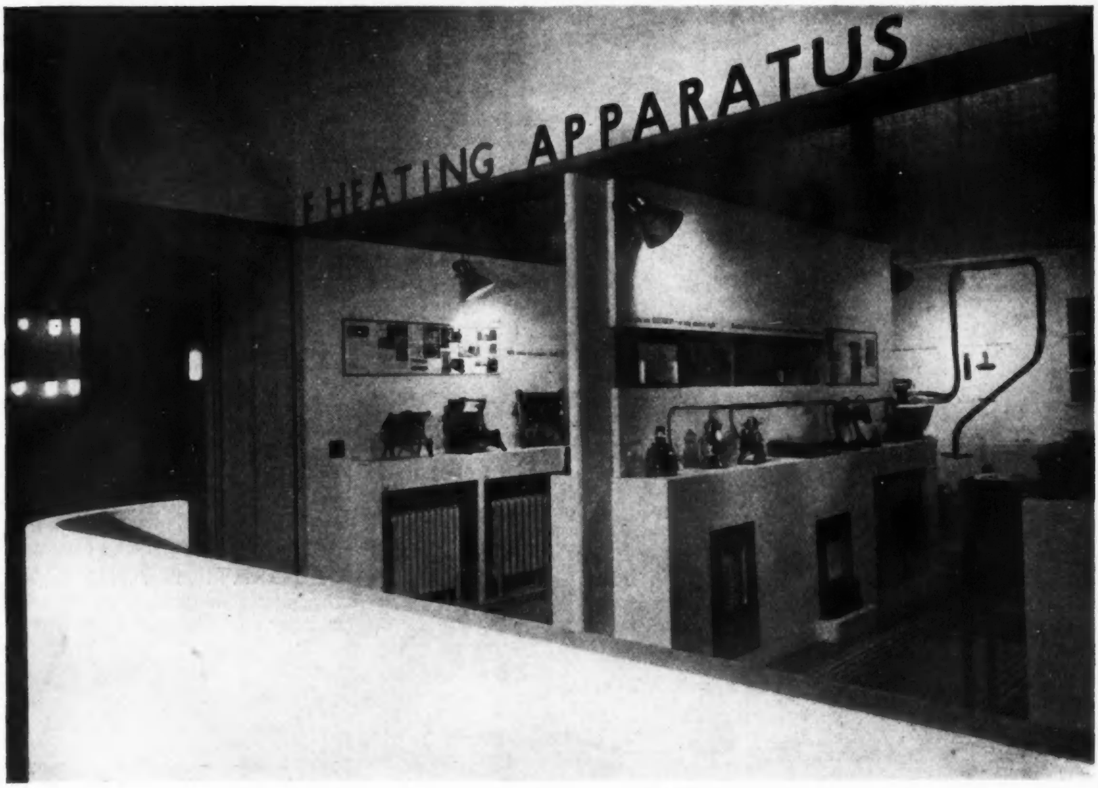

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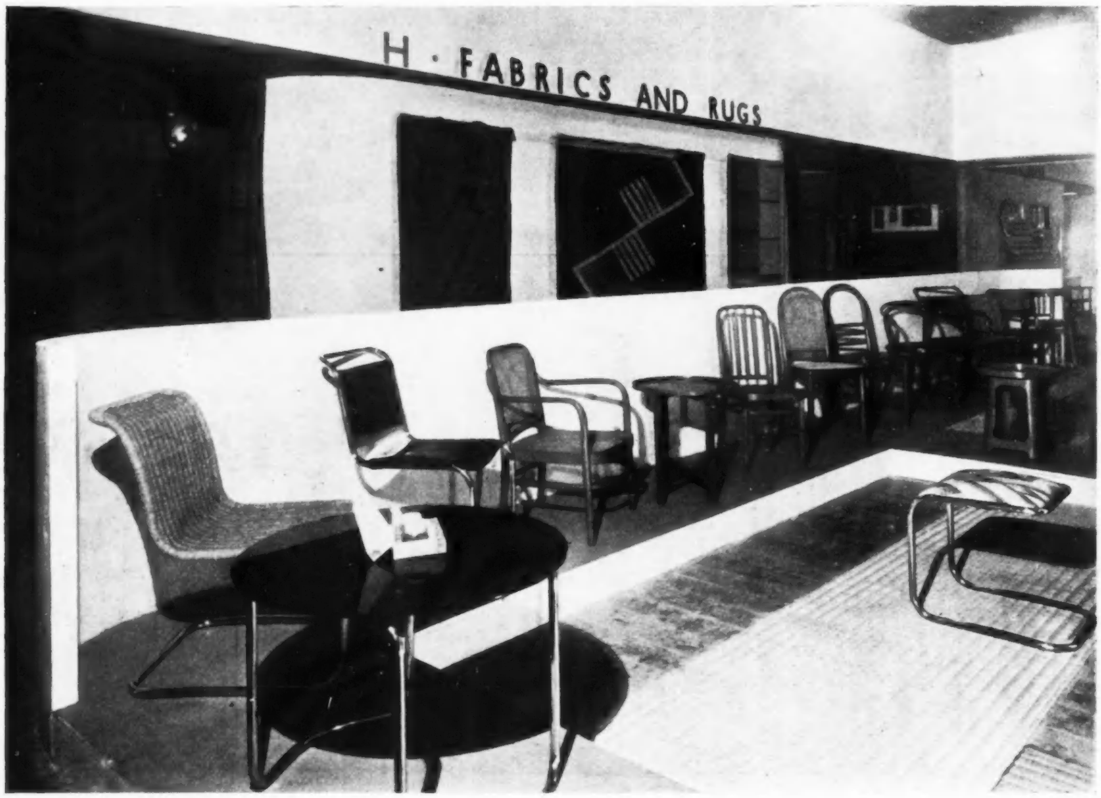

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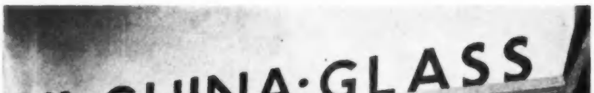

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H. FABRICS AND RUGS. *Chintz, taffeta, cotton, wool, silk and mixtures. See Fig. 5.*

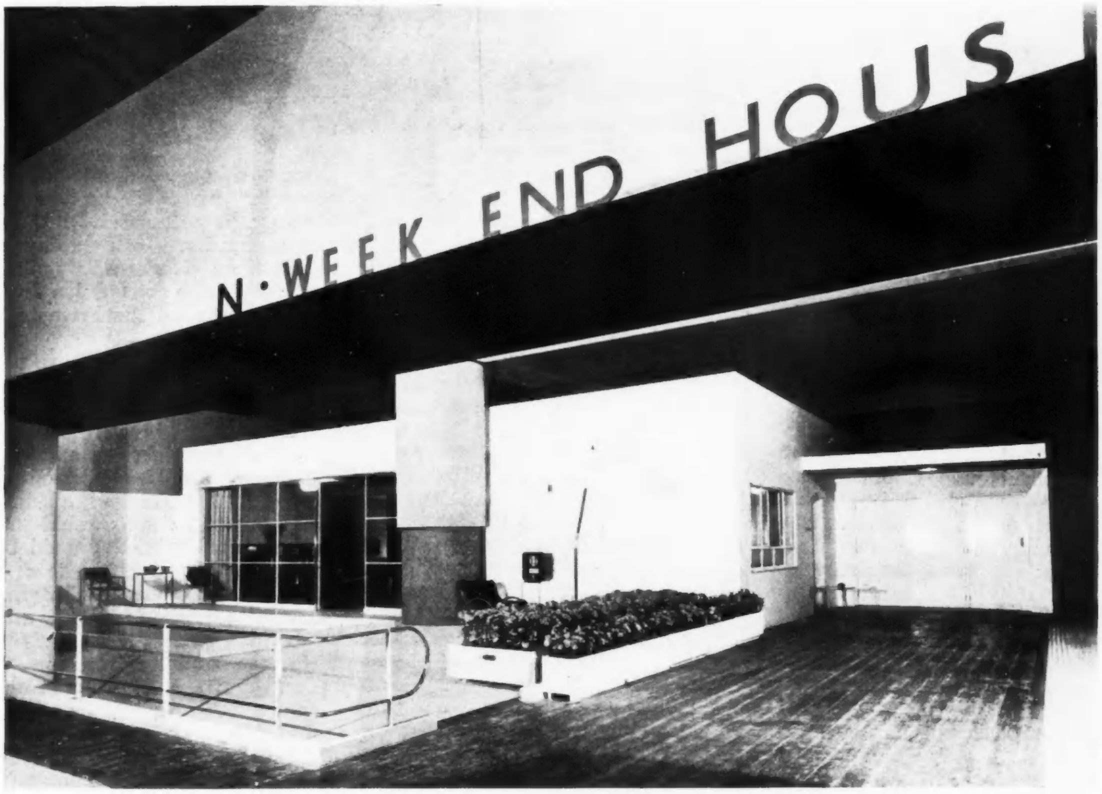
J. FURNITURE. *Unit furniture for domestic uses.*

K. CHINA AND GLASS. *Pottery and earthenware, kitchen ware, china, glass, synthetic ware. See Fig. 6.*

M. DECORATION AND BOOKS. *Drawings, paintings, wood engravings, sculpture and decorative pottery, books.*

SELECTED AND DISPLAYED

AT WHITELEY'S, QUEEN'S ROAD, W.



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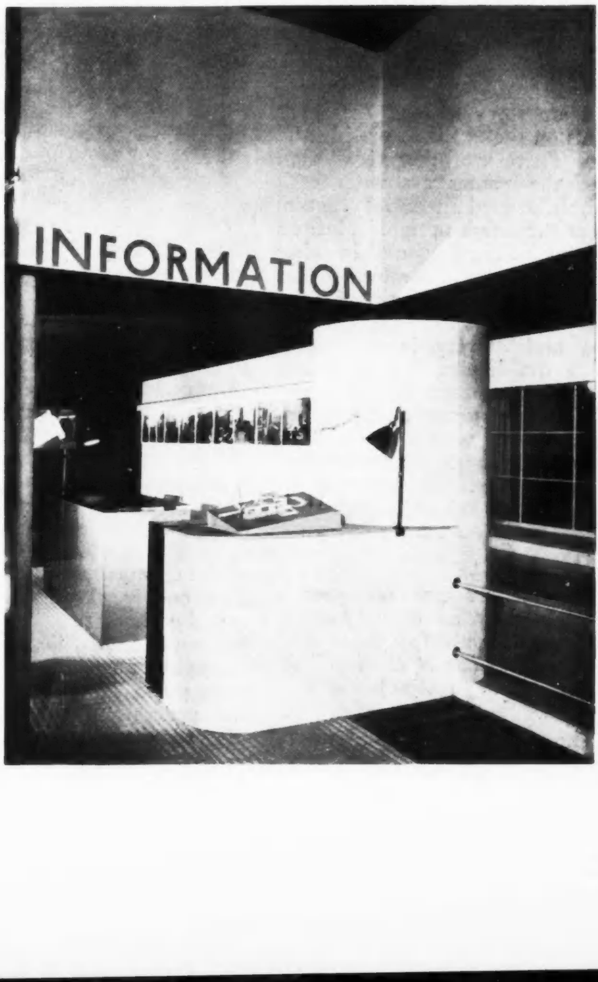
N. THE WEEK-END HOUSE. *A small model furnished house similar to the one designed by Serge Chermayeff, exhibited at the Exhibition of British Industrial Art at Dorland Hall. Hall, living room, terrace, three bedrooms, bathroom, kitchen and garage. See Fig. 7, which is a view across the terrace.*



INFORMATION. *Enquiry and information bureau, including a photograph gallery of typical modern small houses and interiors. See Fig. 8.*

BY SERGE CHERMAYEFF

LETTERS

FROM

READERS

MAJOR HARRY BARNES, F.R.I.B.A.
(Chairman, Architects' Registration Council of the United Kingdom)

R. GOULBURN LOVELL, A.R.I.B.A.
(Secretary, South-Eastern Society of Architects)

ARTHUR WELFORD, A.R.I.B.A.

MURRAY D. SCOTT

SCHOLAR

A Royal Commission

Sir,—I am very much interested in Major Nathan's plea for a Royal Commission into the question of Housing, Town Planning and Slum Clearance.

I made it some years ago, and succeeded in getting it concurred in by the Mansion House Council who presented it through a deputation which waited on Mr. Baldwin and Mr. Neville Chamberlain at the time when Mr. Baldwin was Prime Minister.

The proposal was turned down by him then, but it might perhaps be more favourably considered, under present circumstances, if it was renewed.

An account of the deputation and its reception, with the reply of the then Prime Minister, may be found in my book *The Slum, its Story and Solution*, a cheap edition of which I am shortly issuing.

HARRY BARNES

Height in Buildings

Sir,—I am sorry to read Astragal's comments on the R.I.B.A. presidential address. There are other views than those of the young architects with whom he discussed it, and I venture to enclose the rough notes of a lecture I am giving at Hastings and in other towns in the South-Eastern Area, where my Society is responsible for the teaching of over 100 architectural students, and a very large general public. I am hoping my audiences will accept it in a better understanding than the several young architects referred to. I only wish some of them could attend the open discussions that follow our lectures. We might learn something or they might !

R. GOULBURN LOVELL

[*We regret that we have not space to print the whole of Mr. Lovell's lecture notes, but extracts from them will be found under the heading of "Lecture at Hastings" in our* News *columns on page 690.*]

Sir,—Those "dry, unseeing creatures who are trying to make civilization a matter of book-keeping" to whom Astragal referred in "Notes and Topics," might profit by the following :—

In 1928 that private concern the Bank of England "took over" our nationally owned and nationally paid for Treasury notes. That is to say, as Treasury notes came into the Bank they were destroyed and were replaced by Bank notes. But not all of them ; £4½ million of them were thus destroyed without being replaced (See *The Times*, May 4, 1928.) This £4½ million worth of Treasury notes belonged to the public, the printing press would restore them to the public at the cost of the printing. Further than that, the Bank of England and the Joint Stock Banks (at no cost to themselves) could "lend" about £50 million on them.

Then why hesitate about getting on with the best possible scheme for rebuilding at the Elephant and Castle and elsewhere ? The banks would not be creating any "debt" for the security would be the public's, the work would be done by the public, and the capital values created would belong to the public ; the banks would merely be keeping accounts.

ARTHUR WELFORD

Sir,—I have only just seen your issue of November 2, in which under "Notes and Topics," you refer to a suggestion from Mr. Rowse that 30-storey skyscrapers provide a solution to the slum clearance problem.

I am afraid I cannot from experience give you any information on the life that would be led in a normal flat on the 25th storey of such a building, but I should like to do something to clear up the general misconception of the cost of running a modern electric lift.

Actually, this form of transport is one of the cheapest and safest in existence. The energy consumption is in the neighbourhood of from 2 to 5 kilowatts per ton car mile, depending upon the character of service and the number of stops per mile, and as electric power can generally be purchased for less than 1d. per unit, 60 residents could be carried from the street to the 30th storey and back for rather less than 1d in current charges.

MURRAY D. SCOTT

Slum

Sir,—Although I am not directly engaged in the profession your journal is concerned with, I am a regular reader. In these days of talk about slum clearance, "build better houses," and so on, I feel a few words on the nature of slums would not be out of place.

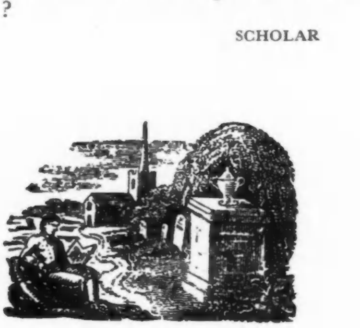
To begin with, what exactly is a slum ? The dictionary says, "a low, squalid street or neighbourhood." That is a very broad definition, and not at all a satisfactory answer to the question ; for if a person existed who did not know what a slum really was, this definition would not enlighten him. A slum should be described as "filthy tumbledown houses unfit for man or beast to live in."

The next question is : How are slums to be abolished ? Now that seems to be a very formidable question—largely a matter of £ s. d. ; but to me, as a layman, the answer seems extremely simple.

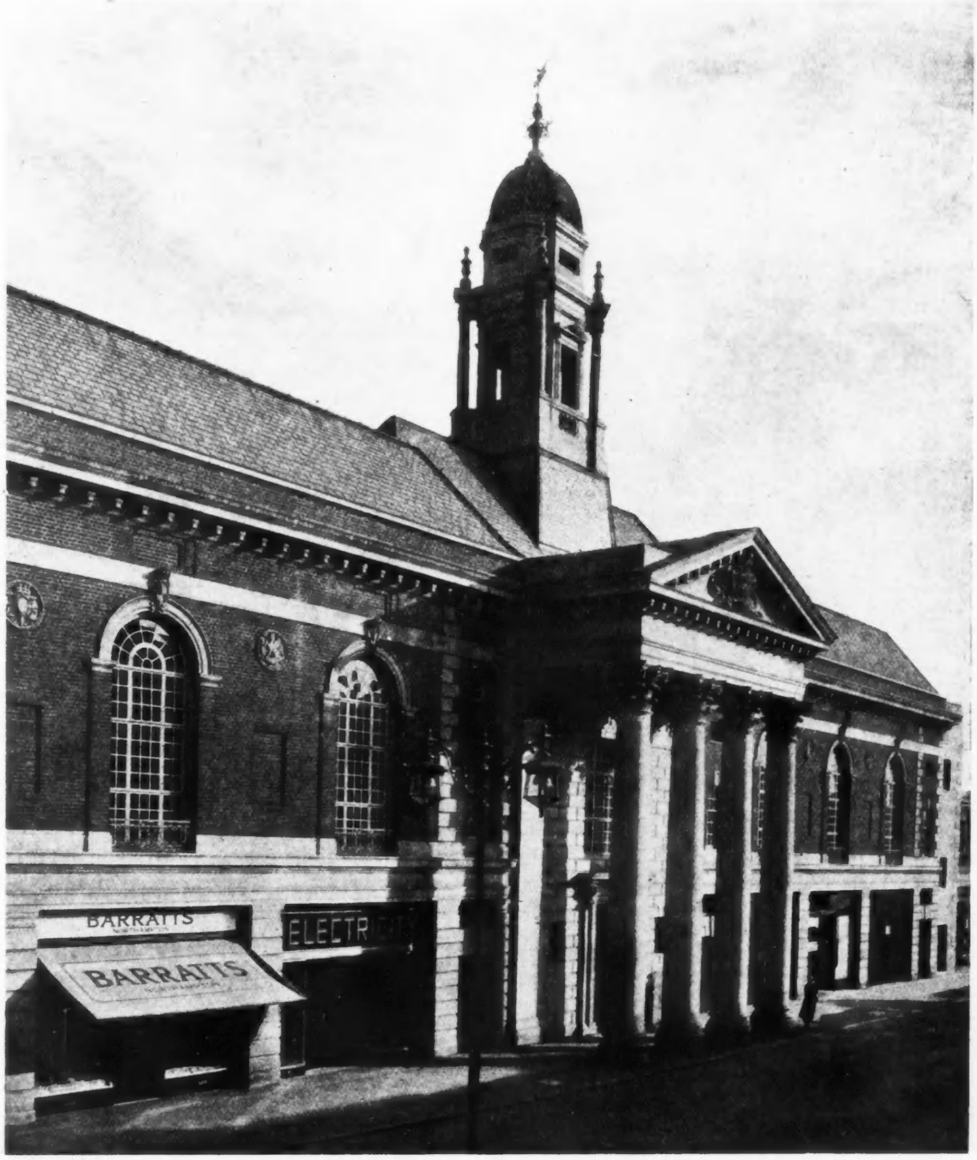
From time to time I have seen in your journal illustrations of huge palaces of industry, town halls, public baths, libraries, etc., all built within the last few years. The building costs must have run into many millions of pounds sterling, which leads me to believe there is no shortage of cash ; and, of course, people who invest money for these buildings naturally expect a return, with interest. What better return could they have than a steady income from house property ; that is to say, why do not people with money to invest become practical supporters of the movement for better housing.

What is the use of local authorities building splendid baths and wash-houses for their people if the people who use them have to return to the dirt of their slum homes. Why not build decent houses with bathrooms ; that would solve two problems at once ?

SCHOLAR



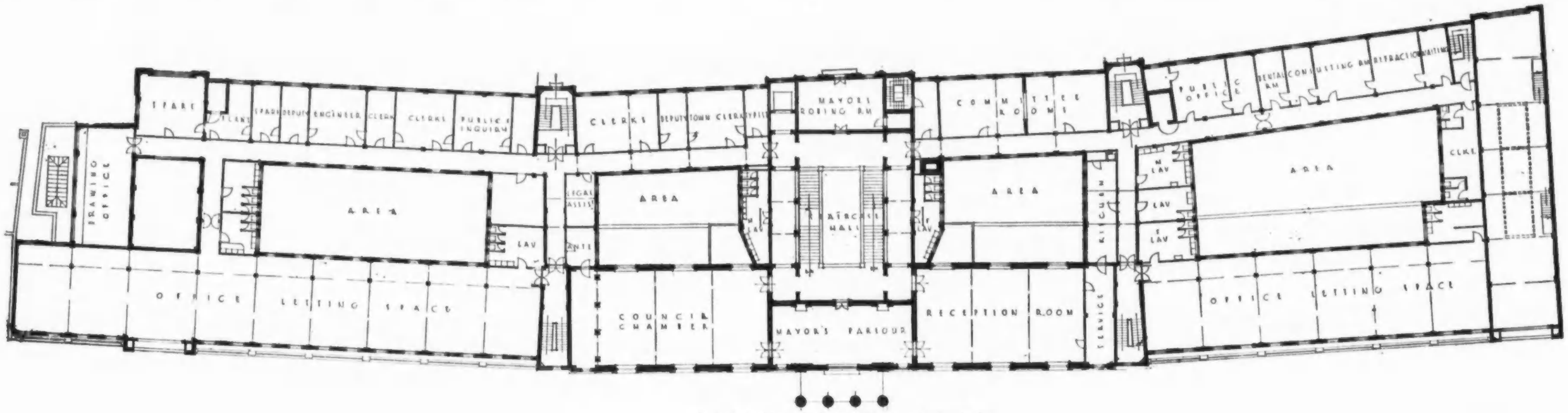
PETERBOROUGH TOWN HALL



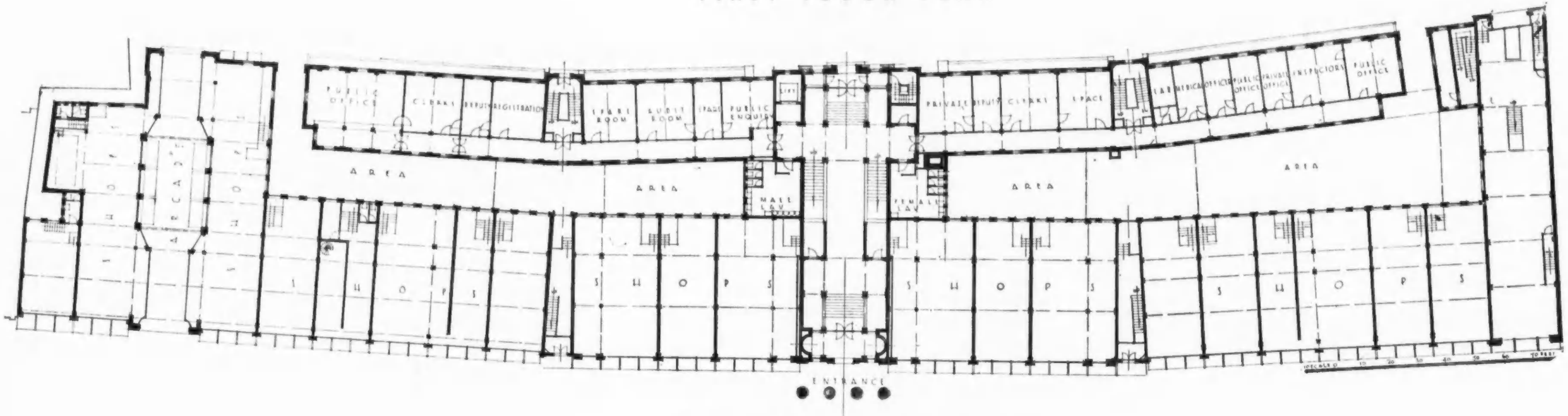
This building, which was won in competition by Mr. Berry Webber in 1927, is now complete except for the upper storey of the offices in either wing, which are to be added at some future date. It is of steel frame construction with hollow tile floors, faced with brick and trimmed with Clipsham stone. The cupola is of Portland stone and houses the fresh air intake apparatus. The photograph above shows the main entrance portico. The shop fronts were not designed by the architect.

DESIGNED BY E. BERRY WEBBER

PETERBOROUGH TOWN HALL


SPARE
DRAWING OFFICE
ENGINEER
CLERK
CLERKS
PUBLIC ENQUIRY
AREA
LAV
OFFICE LETTING SPACE
CLERKS
DEPUTY TOWN CLERK
LEGAL ASSIST
AREA
COUNCIL CHAMBER
MAYOR'S ROBING RM
STAIRCASE HALL
MAYOR'S PARLOUR
COMMITTEE ROOMS
AREA
RECEPTION ROOM
KITCHEN
SERVICE
PUBLIC OFFICE
DENTAL RM
CONSULTING RM
LAV
AREA
CLKS
OFFICE LETTING SPACE

FIRST FLOOR PLAN

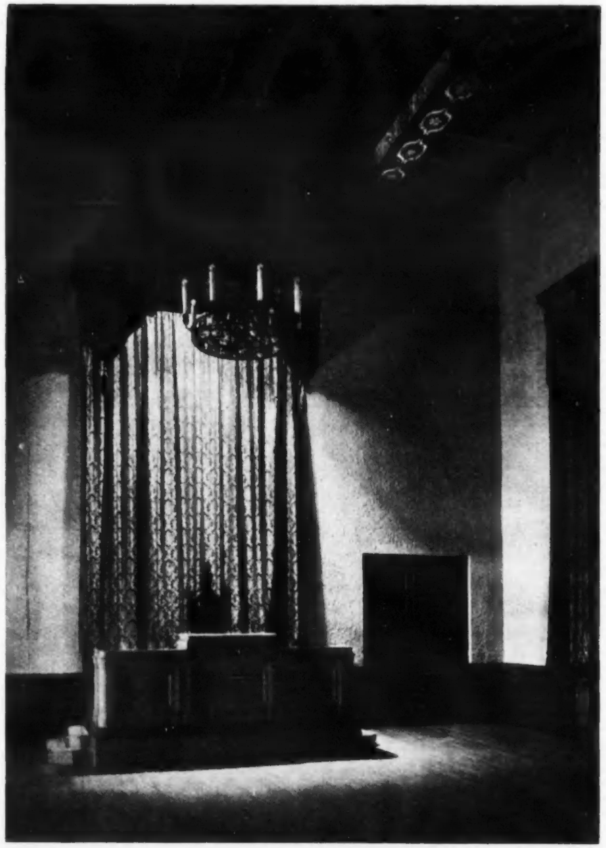

SHOPS
ARCADE
PUBLIC OFFICE
CLERKS
REGISTRATION
AREA
SPARE ROOM
AUDIT ROOM
PUBLIC ENQUIRY
AREA
SHOPS
MALE LAV
ENTRANCE
FEMALE LAV
PRIVATE
CLERKS
SPACE
PUBLIC OFFICE
INSPECTORS
PUBLIC OFFICE
AREA
SHOPS
AREA
SHOPS

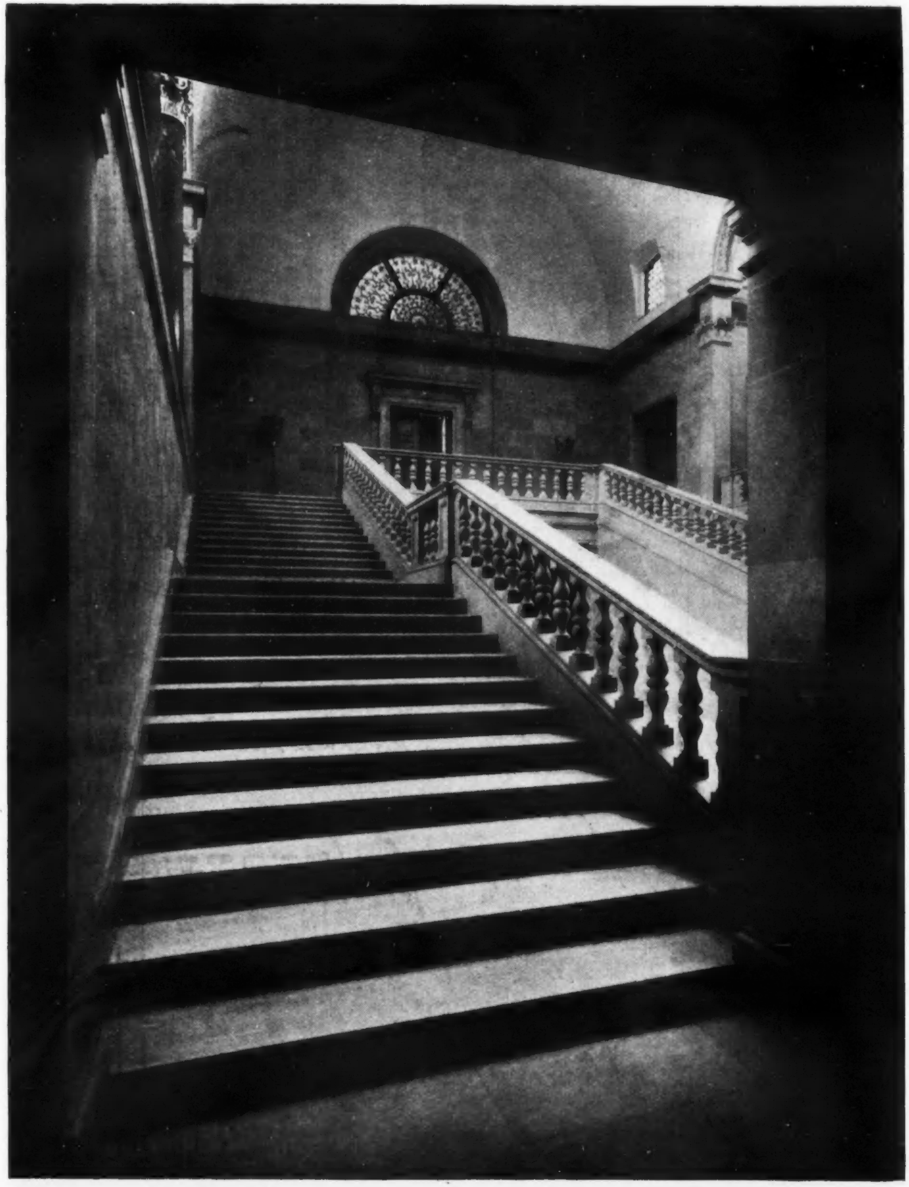
GROUND FLOOR PLAN

Internally, the principal feature is the central staircase, leading direct to the civic suite on the first floor. This is in grey marble, with blue scagliola columns and frieze and a vaulted ceiling.

The council chamber has a public gallery supported by an oak screen with twisted columns, and a painted wooden roof. The mayor's parlour, in the centre of the main front, is intended also to be used as an extra reception room, and is therefore very large, with direct communication with the council chamber and the reception room on either side of it.

The mayor's parlour is panelled in English oak and has a vaulted ceiling in fibrous plaster. In the reception room there is a musicians' gallery, corresponding to the public gallery in the council chamber, and beneath it a servery communicating with an electrically-equipped kitchen capable of preparing a banquet for several hundred people.





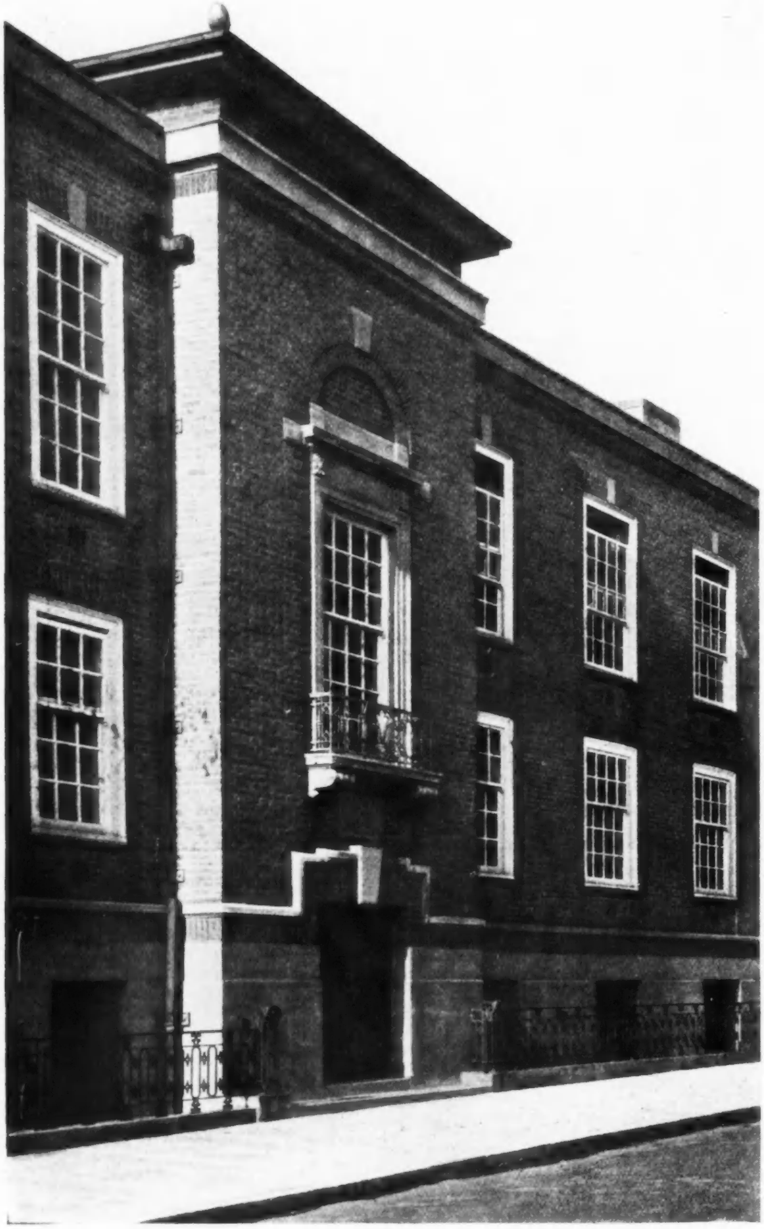
DESIGNED

BY

E. BERRY WEBBER

Above: the mayoral dais in the council chamber, showing a corner of the painted wooden ceiling.

Right: the central staircase.



PETERBOROUGH TOWN HALL

Part of the rear elevation to the service road which has been provided along the east side of the site to give access to the business premises incorporated in the building. The staircase entrance is shown which serves some of the municipal offices.

DESIGNED BY E. BERRY WEBBER

INDUSTRIAL PATRONAGE *OF* ARCHITECTURE

IN THE FUTURE

[*By John Gloag*]

Following are extracts from a lecture with the above title given at Cambridge before the Cambridge Architectural Society on Tuesday last, November 28.

WE are living in an age when patronage is uncertain of its needs and, as it is often controlled by uneducated people, uninfluenced by taste. The architect is almost the only professional type of man in the community that is trained to think lucidly about the planning of work, and the handling of a perplexing diversity of materials for carrying out his work. It is this ability to understand planning that may give to the architect some exceptional opportunities of affecting the life of the community in the future, not only in the obvious directions of building and town-planning, but by influencing the character of industrial products, and the methods chosen for distributing such products to the general public.

In the past, patronage has come principally from three sources. Either from an established institution, such as the Church, or from the head of the State, or from wealthy and powerful individuals. The last source of patronage has, since the middle ages, provided most of the work for English architects.

When the wealthy individual clients were educated, and in consequence took a lively and informed interest in architectural design, great periods of architecture became possible. From the time when England began to appreciate the rhythms of the Renaissance revealed by Inigo Jones until the reign of William IV, England enjoyed a period of order and urbane beauty that we look back upon with admiration ; and sometimes, after inspecting the discords of our own age, we look back to those Stuart and Georgian lucidities with a feeling of despair. Many of our troubles in architecture today we owe to gross or timid patronage.

Anybody who is studying architecture and who hopes eventually to practise, will soon be confronted with the peculiar conditions of contemporary patronage. An architect's training gives him an authoritative background and a feeling of independence about materials; independence in the sense that he is not brow-beaten by materials nor obsessed by their limitations, although he understands and respects their limitations.

The command of architects over materials has been mentioned here because when they begin to practise they will find themselves in a world which resolutely refuses to acknowledge that there has been a structural revolution in the last half century. Knowing what they could do with steel and glass and concrete; envisaging the splendours of form they could command with the materials of this age, they will be compelled by their patrons, and if they are building in London they will often be compelled by restrictions upon elevations, to deal in archaic forms, and to use costly, needlessly heavy and thick materials for the clothing of their steelwork. That is the present situation: bakers' dozens of columns are demanded, also acres of acanthus pastures where the big business patrons can browse upon familiar ornamental forms. This will change. It is already changing. There are tentative experiments which suggest that there may, in due time, be big changes in the spirit of patronage and perhaps an intelligent re-modelling of building regulations.

THE ARCHITECT'S OPPORTUNITY

The architect's opportunity may be roughly classified under four headings.—

1. The wealthy individual client who wants an individual house, large or small, country or suburban.
2. The Public Utility Company, or Municipal Corporation which is concerned with the erection of public buildings and housing schemes.
3. The Financial Development Company which is concerned with the exploitation of residential areas and sites, the erection of housing schemes, individual houses and blocks of flats.
4. Industry, which is concerned with the production of goods, of which many types were once controlled in their design by architects.

The wealthy client is going to be scarce in the future. He is scarce now. He will ask for the adaptation and the modernization of existing buildings instead of initiating fresh work. With more and more country houses going out of commission and with the gradual redistribution of income which is happening without socialism, communism or the application of any predatory political faith, there will be far more camping out done in parts of old houses, far more using up of things that exist, and an acceleration of the movement of people into ready-made houses and flats. This will cause financial development companies to expend in importance as patrons. Whether the ideas of such bodies are eventually controlled by the architectural profession depends very largely upon whether architects can convince accountants and other money-minded people that there are no risks attached to good design and that it could even pay. The onus of justifying his work financially is also upon the architect who works for a public utility company or corporation or for municipal authorities. Those who contemplate securing work from such patrons must organize a partnership of ability in design with business ability. Occasionally these two faculties occur in one fortunate individual. The planning of partnerships for the practising of architecture is one of the vital matters to be studied if clients are to be secured and satisfied.

Although there will be a great deal of building done during the next ten years, and, one hopes, an enormous amount of poisonous and disgusting rubbish cleared away, an equally great opportunity awaits architects in the activities of industry. Not merely in the building of factories or premises for distributing trades, or the extensive reconditioning of workshops everywhere. Electrical development will be changing industrial technique, and factories can be made cleaner and more orderly. Apart from that, in the vast business of manufacturing commodities the men in control are beginning to recognize that industry lacks an important branch of technical advice.

Now industrial production in this country is ably conducted by what I may call process technicians, engineers and chemists. The actual engineering methods employed in producing materials and goods often indicate an inventive competence which is a matter for national pride. We are as a nation just as intent on good craftsmanship with a machine as we were when things were made by hand, but with this difference—whereas handicraft was practised or directed by people who were able to design, machine-craft has only been directed by people who are capable of looking after the wants of the machine. There has never been any serious attempt at a partnership between the manufacturer and the designer.

Creative industry today offers to the architect an interesting chance of designing, not buildings, but goods. I am not suggesting that it is *not* an architect's business to design buildings. It is. I just state that the architect can become recognized as *the* expert on design in the community, and as such he could regain the control over the form of everything that is used in the community. He possessed that control in the eighteenth century, when everything was influenced by his taste, every shape was moulded to accord with his educated judgment.

I may be wrong, but I think that there could be very few studies quite so profitable, after one had completed one's architectural training, as the study of different forms of industrial production. The architect, if he is to control design once more, should know how furniture is made in a modern factory; should know how pottery is made; how carpets are produced; how glass is made; how metal work is fashioned. He needn't spend years of his life in factories, but familiarity with even the superficial aspects of industrial technique will enhance his ability as a designer and, what is equally important, his *authority* as a designer.

Already architects are beginning to be called upon to design furniture, radio and gramophone cabinets, display fittings for shops, all the apparatus used in the retail distribution of goods. Not only will the big industrial firms require consultants about design, but the enlightened retailer will need the same sort of guidance.

THE DESIGNER AS SPECIALIST

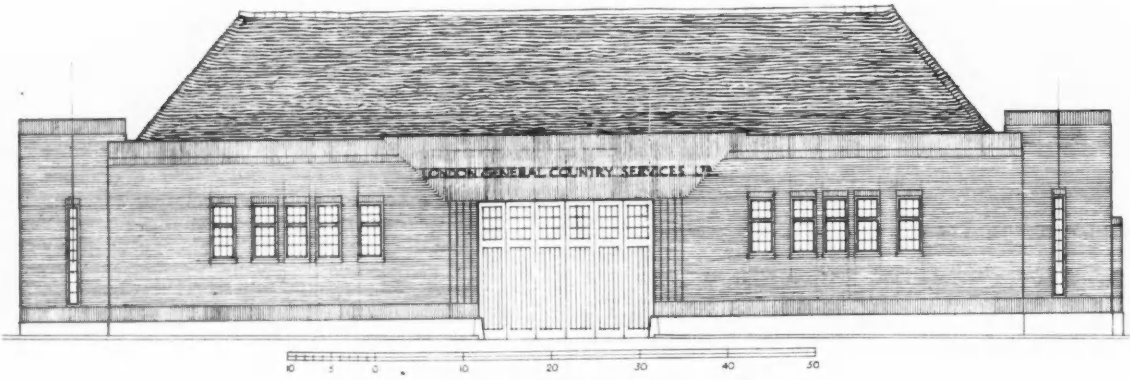
The man of business, who has been laughed at and rather despised, knows his job and, generally speaking, knows how to use specialists. He is only just beginning to realize that the designer is a specialist. Even when he has recognized that fact, he is not capable of discriminating between a good design and a bad design. The business man's problem of selection in design is a difficult one. If he is educated, and his eyes are trained to distinguish the difference between good proportion and bad proportion, then he is a very rare bird indeed. Generally, he can't realize that there are all sorts of shades of excellence in design, dulling down through mediocre efforts to frank atrocity. It is difficult for him to understand that he is not employing a mere technician when he is employing a designer. Still, in this matter we must hope for some effect from the barrage of propaganda which has been hammering at commercial and industrial administrators now for the best part of ten years; the guns being served by all sorts of willing and responsible and irresponsible hands.

On the whole, the man of business is being made to realize that somehow or other he has missed the boat so far as design is concerned. The Prince of Wales, when he spoke at the Royal Society of Arts dinner last month, said: "Our industries have been developed by scientists and technical experts of all kinds, who have been identified with every branch of industry where they would make for improvement in production or distribution. All forms of experts, except artists, have been employed, because manufacturers have not recognized how the artist can sometimes help in the design and the consequent sale of a commodity."

The chairman of a great manufacturing firm in the Midlands said to me afterwards that he agreed with every word that had been said; but he made the significant remark, "We are perfectly prepared to use designers if they are prepared to be practical." He told me of two unfortunate experiments he had made of employing designers and of one successful one.

The successful experiment was the last one he had made, and I think he was to be congratulated for persisting in seeing if there was anything in this design business after two set-backs. The third designer had been successful because he had taken the trouble thoroughly to understand the special processes which were involved in producing his designs, and the result was an alliance between the creative man and the willing machine which was extremely satisfactory both to the man of business and the designer. Incidentally, the successful designer was an architect. The other people had been studying what the art schools call "art." Perhaps it is unjust to say that the art schools have failed, but it is my present belief that the only school that can produce designers who will mean anything in this industrial civilization, is the school that trains people to handle materials and strengthens their perceptions and expands their invention by causing them to study how, in the past, materials have been handled and how, in the present, contemporary materials may be mastered.

BUS GARAGE AT DORKING: BY


LONDON GENERAL COUNTRY SERVICES LTD
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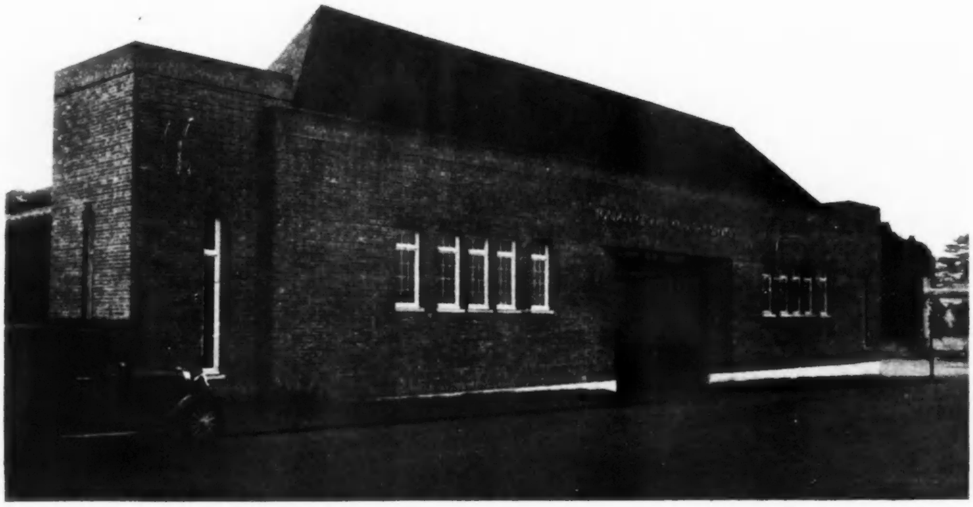
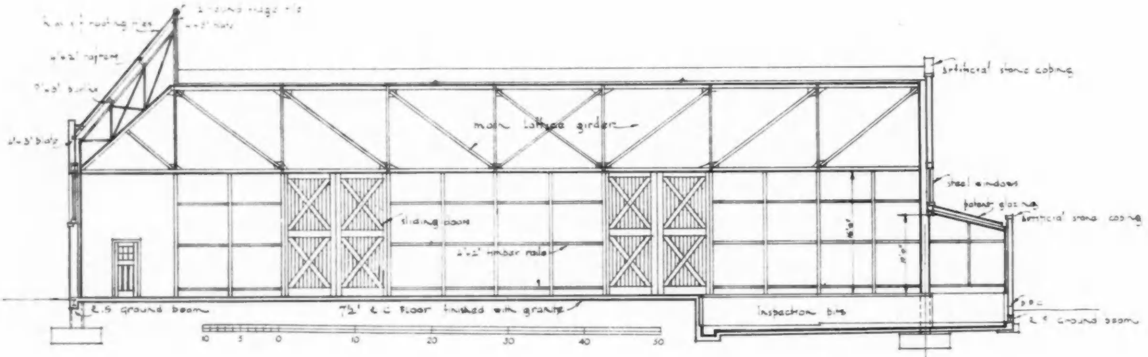
The eastern elevation to the Horsham Road.



The garage portion from the south-east.


roofing tiles
rafters
purlins
plate
main lattice girder
sliding doors
timber rails
artificial stone coping
steel windows
patent glazing
artificial stone coping
R.C. ground beam
7½" R.C. floor finished with granite
inspection pits
D.P.C.
R.C. ground beam
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5
0
10
20
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40
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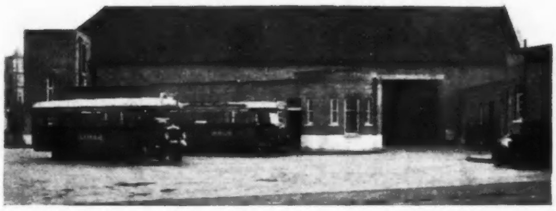
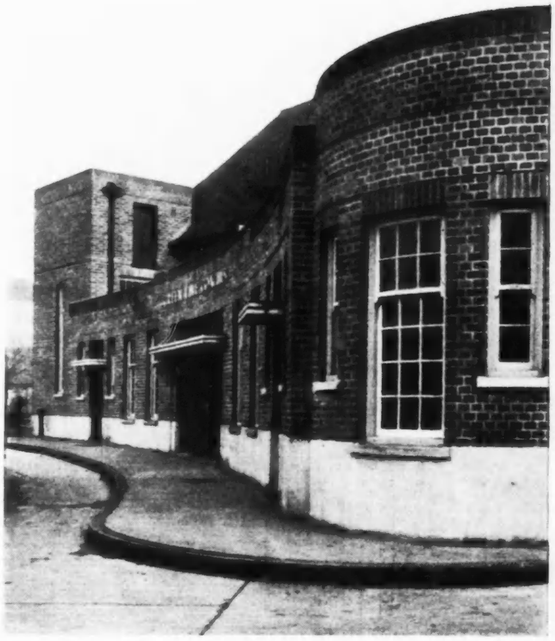
Cross section through garage on line B-B (see plan opposite).

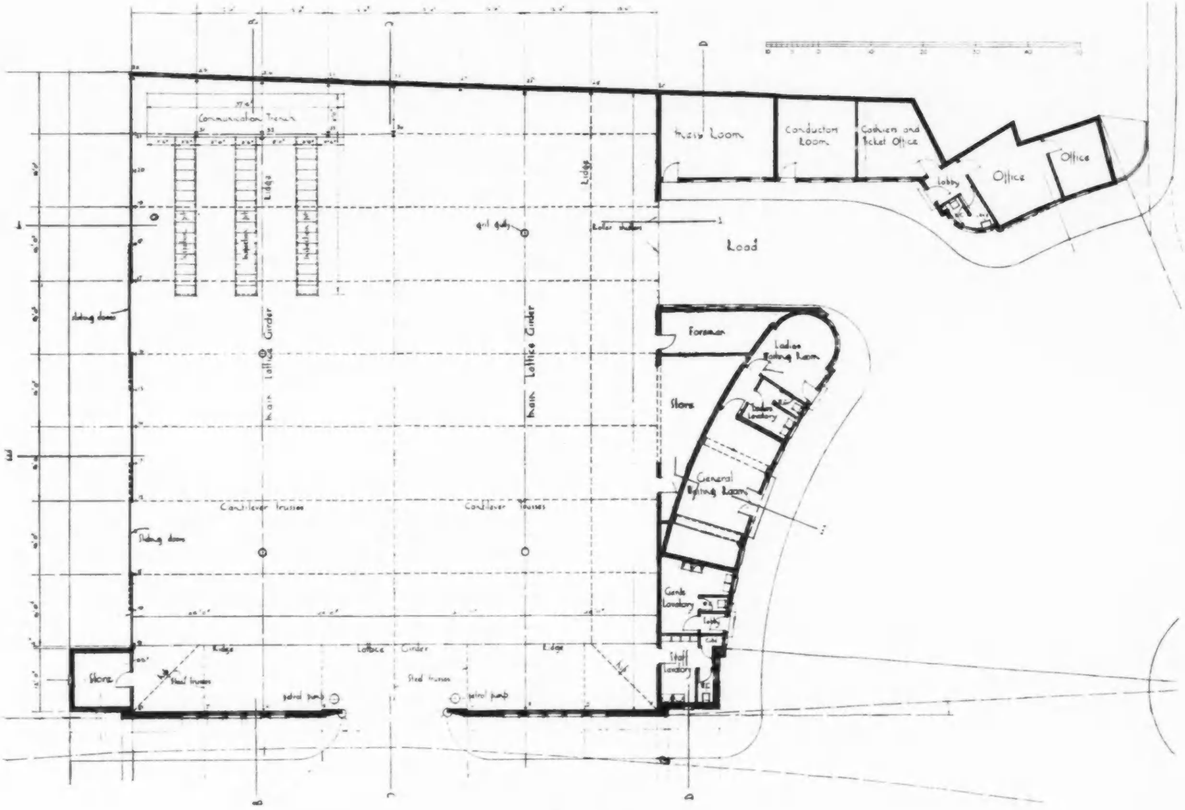
WALLIS, GILBERT AND PARTNERS





The building is situated at the southern end of the town at the corner of the main Horsham Road, and comprises a garage for the accommodation of 30 coaches, staff offices, public booking hall, waiting rooms and lavatories. It is faced with local multi-coloured bricks and roofed with sand-faced tiles.

The photographs on this page show: above, the north side containing the offices; right, a view from the office entrance, looking towards the main road. A constructional detail is given overleaf.


Communication Trench
Inspection Pit
Inspection Pit
Inspection Pit
Ridge
Ridge
Sliding doors
Main Lattice Girder
Main Lattice Girder
Cantilever trusses
Cantilever trusses
Sliding doors
Store
Steel trusses
Ridge
Lattice Girder
Steel trusses
Ridge
petrol pumps
petrol pumps
Mess Room
Conductors Room
Cashiers and Ticket Office
Lobby
Office
Office
Road
Foreman
Ladies Waiting Room
Store
Ladies Lavatory
General Waiting Room
Gents Lavatory
Lobby
Staff Lavatory
WC
0
10
20
30
40
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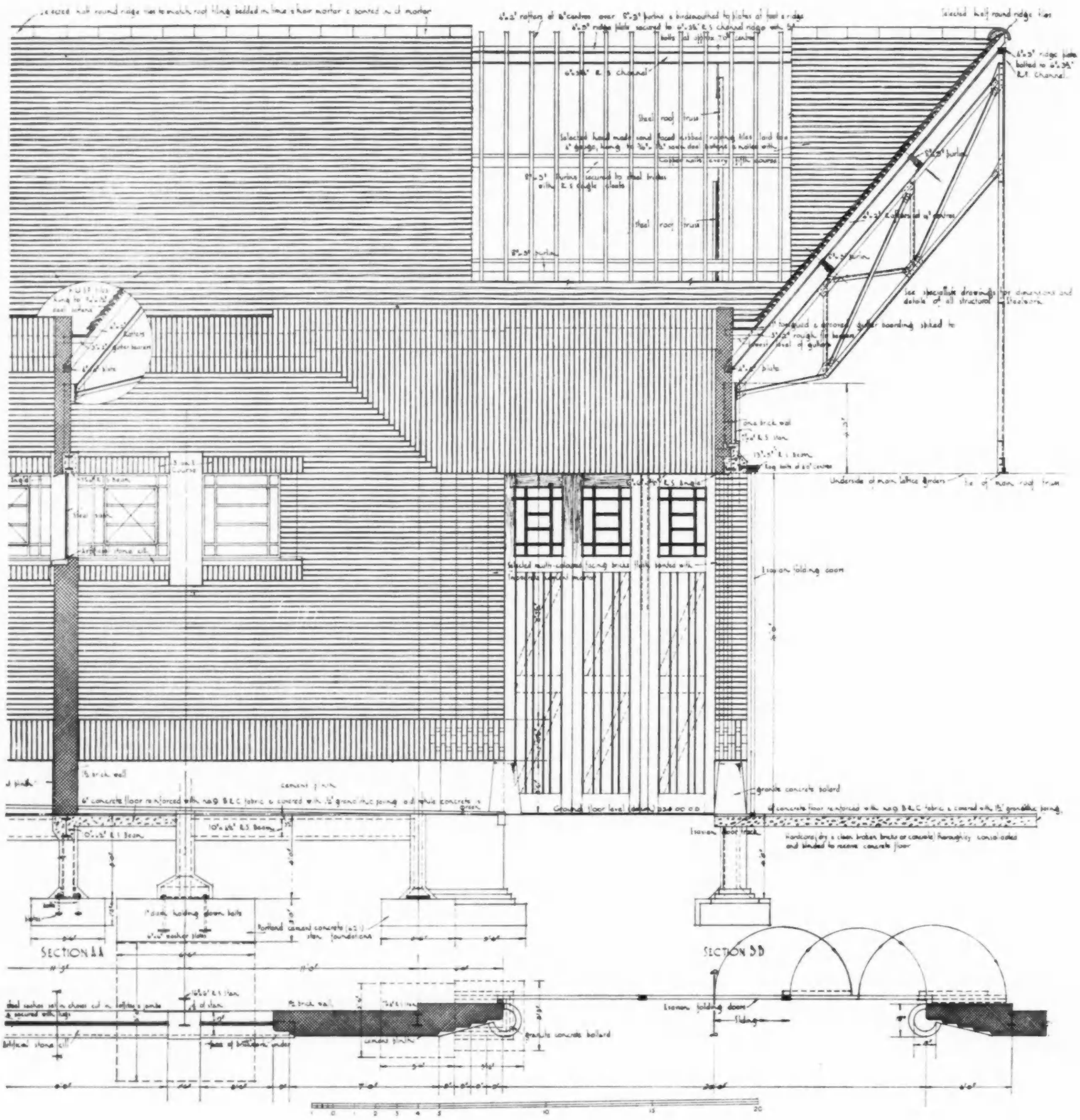
PLAN

BUS GARAGE AT DORKING


Selected half round ridge tiles
Steel roof truss
Selected hand made sand faced rubbed roofing tiles
Copper nails every fifth course
Steel roof truss
Underside of main lattice girders
Esavian folding door
1½ brick wall
Cement plinth
Granite concrete bollard
Ground floor level
Portland cement concrete (6:2:1) stan. foundations
SECTION AA
SECTION BB
Esavian folding doors
Sliding
Granite concrete bollard
Artificial stone cill

Sections and part elevation through the garage portion (see plan on previous page). The garage is 100 ft. wide and 125 ft. deep and 16 ft. high in the clear. The roof is constructed with lattice girders (spanning the larger dimension) and cantilevered trusses, so that a clear span in either direction is obtained. The main flat roof has been masked by a steeply pitched screen roof on the main front, which is intended to harmonize with the general brick and tile character. This false roof, covered with sand-faced tiles, is shown at the right-hand side of the above drawing. Metal windows are used, and the shutter doors are of the hinged frame type.

BY WALLIS, GILBERT AND PARTNERS

LITERATURE

STEELWORK LOADS AND STRESSES

Report on Steelwork for Buildings. Part I: Loads and Stresses. The Institution of Structural Engineers.

THIS revised report acknowledges its indebtedness to the first report of the Steel Structures Research Committee and a study shows that in nearly every case the loads and stresses specified coincide with those given in the L.C.C. Code of Practice.

A few exceptions are made such as:

1: A more comprehensive list of recommended live loads for various types of building.

2: A specified wind pressure which is graded with the height above ground and gives smaller moments than the pressure specified in the Code of Practice.

3: Increased stresses are allowed for beams encased with certain thicknesses of concrete.

As this report is so closely in line with the Code of Practice its usefulness might be queried, but the architect who has to make or check steelwork calculations will find that it does give him guidance on many points of detail design which the Code does not mention, but on which authorities can cause a large amount of trouble. For example, the question of the amount of eccentricity to be taken for various types of beam-to-stanchion connection, is adequately dealt with.

Practical rules are also given for the amount of end fixity to be taken for various types of stanchion, allowable stresses on beam and girder webs for various ratios of depth to thickness, and a method of calculating the resistance of the webs of beams to concentrated load. A method of design against wind pressure is also specified. These and other paragraphs dealing with lift loads, etc., make this report a very useful document to all interested in steel frame calculations.

W. E. J. B.

THE CARPENTER'S TOOL CHEST

The Carpenter's Tool Chest. By Thomas Hibben. London: Routledge: Price 5s. net.

THIS book is intended for children. It is a history of the development of the carpenter's tools from the earliest ground stone and flaked flint implements up to the end of the Renaissance period. It should, however, be interesting to many besides children, because the author has succeeded in relating the development of the tool constantly to the necessity that conditioned it; and his story thus becomes a reflection in miniature of the story of civilization itself; though, of course, limited in this sense by its pre-occupation with one material.

The book begins with some interesting pages showing pictorially the evolution of the axe, the drill, the saw and the adze and other essential tools whose use is continuous through all civilizations, and describes their individual purpose as part of the modern carpenter's equipment before dealing with them collectively and chronologically. It is thoroughly illustrated with sketches by the author.

The book has one particular virtue—that it does not suggest that the advent of the machine entails a change in our attitude to work, or that craftsmanship now needs to be preserved from the influence of the machine. In the last chapter the author says: "A craftsman is one who understands his tools and his material and uses them with skill and honesty. It does not matter whether his tool is a chisel or a planing machine . . . There is no virtue in using more effort to do a job than is necessary to do it well, so that if you have a machine that will save you work, use it, but with knowledge and skill."

There he recognizes—what is all too seldom recognized—that the most elaborate machine is only a highly developed tool still completely under human control, and that the simplest tool is, within its own limitations, a perfect machine. The difference between the two is one of degree only and not of kind.

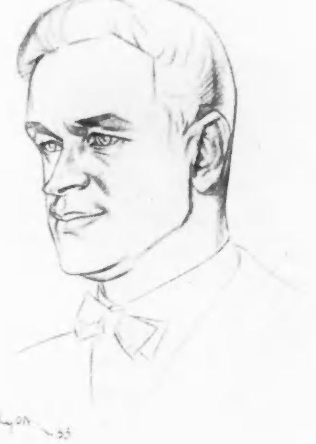
J. M. R.

SCHOOL PRINCIPALS

• 2 •

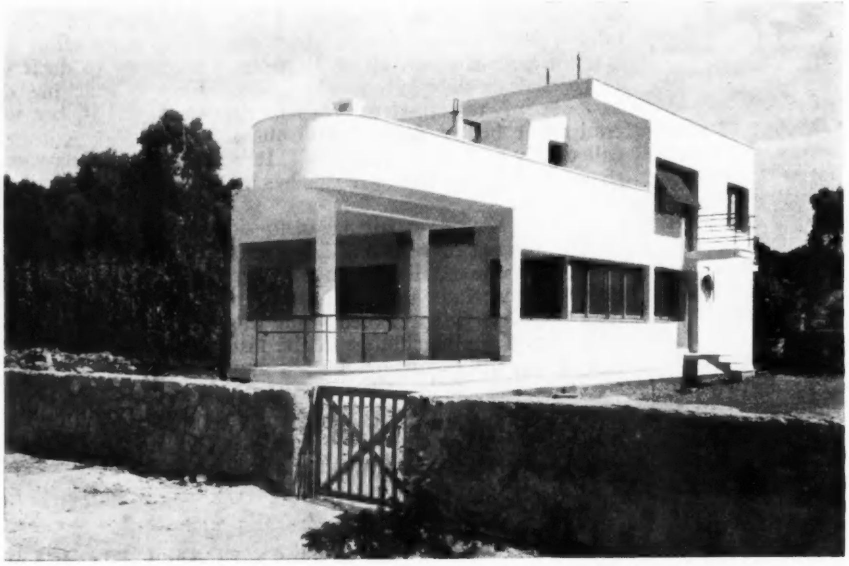
R. A. CORDINGLEY

SCHOOL OF ARCHITECTURE UNIVERSITY OF MANCHESTER

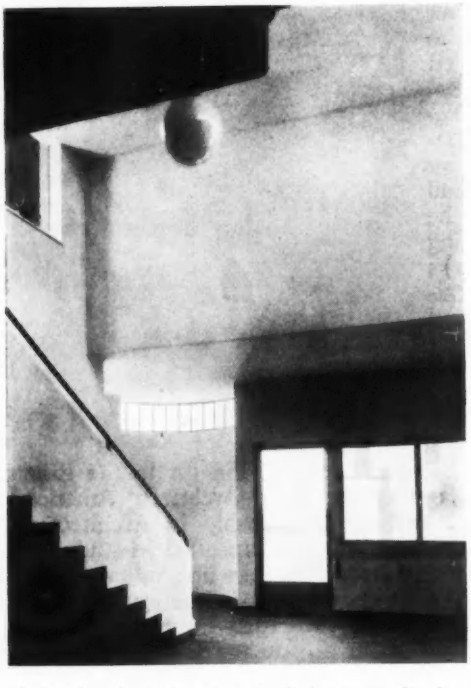


PROFESSOR R. A. CORDINGLEY, M.A., A.R.I.B.A., was born at Sale, Cheshire, in 1896. He was articled to Mr. R. J. McBeath, F.R.I.B.A., of Cheshire, from 1911 to 1914. After the war—he served in the Royal Fusiliers and the Royal Engineers—Professor Cordingley took his Degree Course at the Manchester University. His prizes and studentships included the following: Jarvis Travelling Studentship (1920 and 1921); Manchester Society of Architects' Prize for Measured Drawings (1921); Manchester Institute of Builders' Travelling Studentship (1922). Manchester Building Trades' Exhibition Prizes: First Prize for Measured Drawings; First Prize for Sketches (1922); Finalist in the Rome Scholarship in Architecture (1922); Society of Architects' American Scholarship (1923); and the Rome Scholarship in Architecture, (1923). All the travelling scholarships were expended in study and research in England, France and Italy. In 1922 he graduated B.A., with first-class honours in Architecture; and in the same year he became an Associate of the R.I.B.A. In 1926 he took his M.A. degree (Manchester) and set up in private practice with Mr. D. McIntyre, A.R.I.B.A. Before being appointed to the Professorship of Architecture, Manchester University, in succession to Professor A. C. Dickie, Professor Cordingley held the following appointments: Part-time Lecturer in Architecture at Armstrong College (1922-29); Master of Architecture and Head of the School at Armstrong College, Durham University (1929-32).

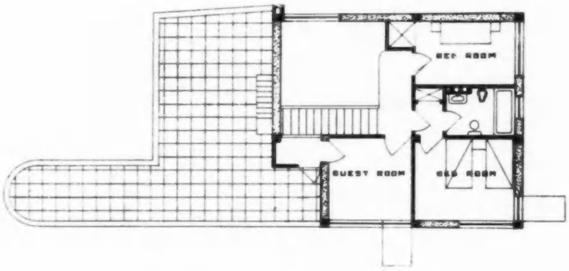
SEASIDE VILLA NEAR ATHENS:



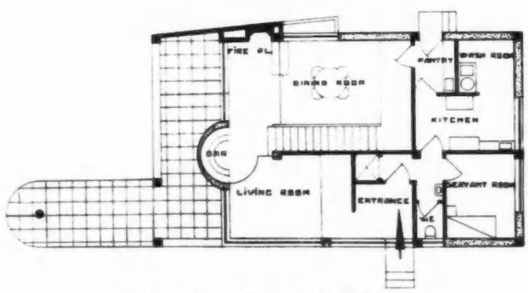
The house from the road, showing the terrace and the long range of living-room windows which face approximately to the south—also to the sea, which is only a few yards away.



An interior view taken from the dining room, showing the door on to the terrace and part of the staircase.

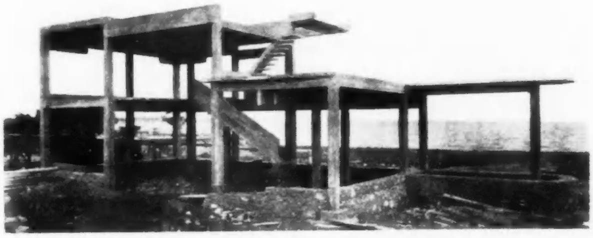

BED ROOM
GUEST ROOM
BED ROOM

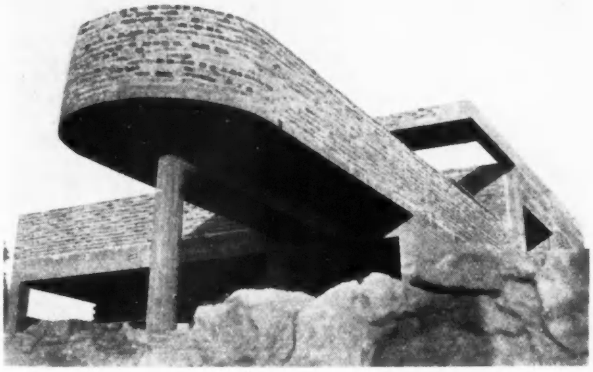
FIRST FLOOR PLAN

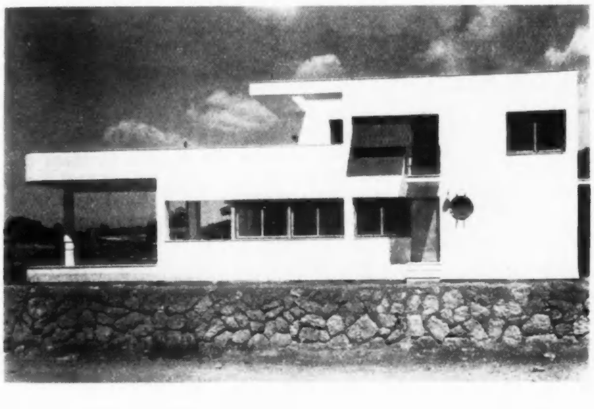

FIRE PL.
DINING ROOM
PANTRY
WASH ROOM
KITCHEN
BAR
LIVING ROOM
ENTRANCE
SERVANT ROOM
W.C.
10 5 0 10 20 30 40 50 60

GROUND FLOOR PLAN

BY STAMO PAPADAKI







The house is constructed with a reinforced concrete frame, hollow tile floors and roof and cellular brick infilling and partitions, the latter of half-brick thickness.

The two upper photographs on this page show the house under construction, first with the concrete frame only and next with the infilling added; the lower one shows the completed house from the south.

The walls are insulated with cork; and the roof covered with pumice concrete and cork, with stone slabs laid on bitumen sheeting to provide a walking surface. The rendering for the external walls is of powdered marble, lime and sand. The windows are of wood, sliding sideways, with wood roller blinds. Internal doors and a certain amount of built-in furniture are in laminated board.

There is no provision for heating, as the house is for summer occupation only.

LAW REPORTS

LIABILITY UNDER THE PUBLIC HEALTH ACT

Street (Somerset) U.D.C. v. *Wall.—Chancery Division. Before Mr. Justice Eve.*

THIS action raised a point as to the liability of a owner of land to pay certain charges for work carried out by the Street (Somerset) U.D.C. under section 30 of the Public Health Act, 1925.

It appeared that the Council sued Mrs. L. E. M. Wall, of Street, to recover £320 balance of an amount they alleged was due to them for carrying out certain road work, and a further £40 for other work.

Mrs. Wall, in her defence, set up that the Council in regard to the £40 had failed to carry out their agreement, and therefore she was not liable. As to the claim to the £320, Mrs. Wall alleged that the Council not having complied with the terms of a deed to make up the whole of the road by a certain time, such deed was void and the Council could not succeed in their action.

Mrs. Wall had purchased land at Street which she had laid out as a building estate, and, under the Public Health Act, 1925, she was liable for the widening of the lane upon which the land abutted. The Council had carried out the work for her and now claimed to be repaid the amount they had expended on her behalf.

His lordship, after hearing a number of witnesses, gave judgment for the Council for the £40 and the £320.

His lordship said the Council were entitled to the £40 and the defendant had a right of recovery of that sum from the person who had purchased the land from her.

The £320 claim was the balance of a number of charges of £20, being the amount which defendant agreed to pay in respect of the widening, etc., charges on each plot. Mrs. Wall, his lordship observed, was given breathing time by the Council for her statutory liability, seeing that she only had to pay £20 a plot, although it might have cost the Council a much larger sum. He thought the agreement, which relieved Mrs. Wall of her liability if she paid £20 for each plot she owned, to the Council, was a fair bargain. He did not think a proper construction of the agreement was that put forward by Mrs. Wall's counsel, viz., that if the Council had not made up the whole highway by the time mentioned in the agreement, it was then void. It was only if the Council had failed to carry out its obligation to her —which they did not.

USER OF A PATH AT THE REAR OF PROPERTY

Liddiard v. *Waldron.—King's Bench Division. Before Justices Talbot and Macnaghten.*

THE user of a paved way at the rear of houses at New Road, Chisledon, near Swindon, which was built in 1908 and had been used since then by the occupants in the road, formed the subject of an appeal between the plaintiff, Mr. J. C. Liddiard and his neighbour Mr. H. Waldron, the plaintiff alleging free user of the path till a dispute arose in 1930.

The matter had been before the Swindon County Court judge, the plaintiff alleging that the defendant had interfered with the user of the path and that the County Court judge had refused to grant plaintiff an injunction restraining the defendant from interfering with the user of the path, he having blocked it up. From this judgment the plaintiff appealed. Defendant supported the decision of the County Court judge and submitted that plaintiff never had any right to the user of the path.

The Court now held that Mr. Liddiard was entitled to the right of way claimed, as being impliedly reserved in the conveyance by the owner to Mr. Waldron. They reversed the judgment of the County Court judge and granted Mr. Liddiard the injunction he sought with costs, and intimated that the judgment did not authorize any user of the path other than as a right of way.

Mr. Justice Talbot, in giving judgment, pointed out that it appeared that the real origin of the trouble was due to children of a former tenant causing annoyance by using the path as a sort of playground. From the facts it seemed that Mr. Waldron bought No. 21, New Road, in 1919, and the question for the Court was whether he acquired it subject to the right of the occupier of No. 22—Mr. Liddiard's house—to use the path as a way connecting his house and garden with the high road. In his lordship's view the principle to be applied to the case was that when a common owner first let or sold one of two houses, where there was a strip of land the nature and situation of which showed an intention that it should be available for a way of convenience for either house, no subsequent owner or occupier could claim to hold his house free of the right of the other occupier to use the way, so long as the circumstances remained substantially the same as originally. If the land conveyed to Mr. Waldron was never granted free of that right, it was not free now, even though the right of user was not expressly mentioned in his conveyance. Under these circumstances, Mr. Liddiard was entitled to the right of way he claimed. The right of way was important to Mr. Liddiard, seeing that it had been exercised for 25 years by the tenants of No. 22 without objection and without any serious inconvenience to the occupier of No. 21.

Mr. Justice Macnaghten concurred.

Town Planning Institute

The following lectures and discussions have been arranged by the Town Planning Institute: December 8—"The Town Planning Movement," by the Rev. Dugald Macfadyen, M.A. OXON. 1934—February 9—"Model Clauses," by F. Longstreth Thompson, B.SC., F.S.I. March 9—Discussion on "Model Clauses." April 27—"Height and Bulk of Buildings in Relation to their Requirements and Surroundings," by H. V. Lanchester, F.R.I.B.A. May 25—"The Relation of Educational Buildings to the Town Plan, their Frequence, Areas Required, etc.," by W. Dougill, M.A., A.R.I.B.A.

The above lectures are to be held at Caxton Hall, Westminster, S.W.

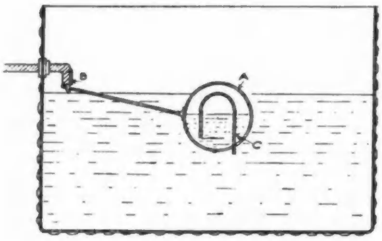


Figure 1

TRADE NOTES

[BY F. R. S. YORKE, A.R.I.B.A.]

Thermostatic Ball Valve

IN the thermostatic syphon ball valve, an ingenious device about to be placed on the market, there appears a solution to problems concerning common household boiler installations that constantly engage the attention of engineers. There is always a certain element of danger to domestic hot-water circuits during winter months, when a sudden icy spell may play havoc with water pipes, and an ice-covered tank may cause a boiler "blow-out" in a low pressure system.

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It seems, therefore, that water in tanks and pipes should be maintained at a temperature at which it cannot freeze, and the thermostatic ball valve is guaranteed to maintain such a temperature. The ball valve itself is of standard pattern. Its lower surface is connected with the water in the tank by a short length of piping: from its upper surface a length of flexible tube runs to a water-tight air-vessel situated below the water near the bottom of the tank. (See Figures 1 and 2.)

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The ball is so adjusted that with a water temperature in excess of the desired temperature it will float. When the water temperature falls below this point, the air in the air-vessel will contract and draw just sufficient water into the ball to destroy its buoyancy. The ball will sink, opening the valve, and allowing hot water to enter the tank from the relief pipe.

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There is a reverse action when the water temperature rises above the danger mark. The air in the air-vessel expands, driving sufficient water from the ball to restore its buoyancy, thus closing the valve. The device may be applied equally well to industrial cases where the maintenance of a maximum or minimum temperature is essential.

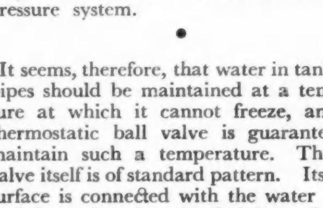

Figure 2

Cork Insulation

Compressed cork slabs, for insulating purposes, are now obtainable at the following prices, which appear remarkably low:

1 in.	thickness,	2⅜d.	per ft.sq.
1½ in.	,,	3½d.	,, ,,
2 in.	,,	4¼d.	,, ,,
3 in.	,,	6⅜d.	,, ,,
4 in.	,,	8½d.	,, ,,

These prices include delivery.

●

The slabs measure 3 ft. by 1 ft. and 3 ft. by 2 ft. They are made from Spanish cork granules, compressed in moulds and baked. The heat liquefies the natural gum which unites the granules in a firm mass, without the use of a foreign binder.

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National Physical Laboratory tests show that cork slabs have low conductivity, and afford good insulation whilst occupying relatively little space. The slabs are easily cut, and after cutting present smooth unbroken edges. They can be nailed to wood or erected in a screed of Portland cement against normal walling materials. They can also be assembled to form self-supporting partitions.

Waterproofing Concrete

I have received a list of detailed instructions, in the form of brief specifications, for the use of Drikon in concrete and cement rendering to assist rapid hardening and to increase strength and waterproof qualities.

●

Drikon, it is said, is not a perishable pore filler, but acts as a catalyst "forcing the hydration of the limes in the cement" and becoming an integral part of the concrete. It is a liquid which is added to the mixing water, in proportions that vary in accordance with the nature of the work undertaken. The proportion of water containing Drikon added to 1 c. ft. (90 lb.) of cement, remains constant at about 4 gallons, but the amount of Drikon in this quantity of water varies, in the case, for instance, of waterproofing cement plaster to new walls to resist light water pressure, from 1 pint, for light dampness, to 2½ pints, for heavy dampness, and for waterproofing cement plaster to resist heavy water pressure it increases to as much as 25 per cent. of the mixing water.

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Among the applications for which typical specifications are given in the list are: waterproofing granolithic to new floors to resist varying degrees of water pressure and dampness; assisting the rapid hardening of granolithic and poured concrete; plugging leaks and water bursts; cement grouting; rapid hardening and hard wearing stair treads; sewer and water pipe joints and pre-cast concrete work.

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In small quantities, Drikon costs a little over 20s. per gallon; there is a proportionate decrease until, for 100 gallons, the cost is 13s. per gallon.

Cupboard Units

I have received particulars of a British made cupboard unit, known as "Kupb," that is made for building direct into a wall. The unit consists of a cast-iron case fitted with a mirrored plate-glass frameless door hinged to a chromium-plated surround. It provides a flush fitting cupboard for bathroom, hospital theatre, or consulting room. The cupboard is finished internally with cellulose enamel, and fitted with a plate glass shelf. It is reversible, so the door can open from the left or right. Two or more units may be built-in side by side.

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By utilizing the wall thickness, these cupboards save space and eliminate awkward and unsightly projections. The mirror-door and plated frame are detachable from the case, and are fitted with four screws. They are not fitted until the case is built-in and the plaster and decoration made good around it. The retail price is 35s.

Heraklith

Several readers have asked for the name of the manufacturers of Heraklith; it is Newman and Holt, 24 Holborn, E.C.1.

THE HOUSING PROBLEM

THE MINISTER OF HEALTH REPLIES TO HIS CRITICS

Sir Hilton Young, the Minister of Health, addressed the National Housing and Town Planning Council at Malvern on Saturday last. In the course of his speech, which was headed "A Reply to Critics," the Minister of Health said :—

Local authorities have been requested to send me their programmes for dealing in five years under the Act of 1930 with the houses in their areas that need clearance. The following is the present state of affairs as to the response to that request. There are 1,717 housing authorities including 1,604 county districts. I have received returns from 1,320. From a further 352 I have received communications about their programmes that satisfy me that they will take action.

There remain 45 housing authorities, all for county districts, that have neither submitted their programmes nor are in communication with me in such a manner as to satisfy me that they will take the action necessary. As to these, I propose a time limit. If in any case the matter has not been put right within that limit, steps will be taken to secure the holding of a public inquiry under the Act of 1930.

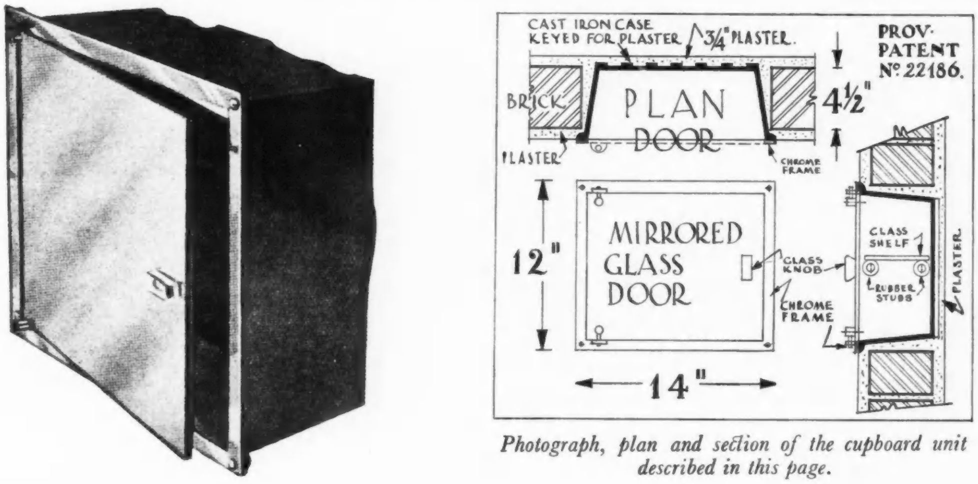
Critics of this campaign are of the three sorts that are always active when there is action afoot. There are those who say that we are going too slow; those who say we are going too fast; and those who say that whatever we are doing we ought to do it differently.

Are we going fast enough as to pace? Local authorities were asked to submit programmes for the clearance of their slums in five years and no reasonable being will doubt that if we get rid of all undoubted slums in five years that will be a great achievement. In London, and perhaps a few other towns where the problem is specially acute, nobody has ever supposed that it is possible to do it all in that time. As to adequacy of programmes, local authorities are, in general, responding with programmes prepared with vision and energy, and which by no means under-estimate their task. To clear away, as the authorities propose, 200,000 houses in five years is in itself a big effort, especially for a nation that has passed through a long period of depression from which it is only beginning to escape. The provision of the necessary new houses will cost a capital sum of £95 million. It will cost the taxpayer £2¾ million a year and the ratepayer £825,000 a year for 40 years. It will undoubtedly occupy the very best energies of the housing organizations of our local authorities, supported by all the help that the Ministry of Health can give them, with sustained and intense work throughout the five years.

Publicity has been given to a variety of conflicting estimates of the number of houses that should be cleared. They have been put forward from sources of varying and sometimes dubious authority. They resemble each other only in a common exaggeration of the size of the problem. Some run as high as 4,000,000 houses. There are about 9,500,000 houses only in the country. This estimate would thus have us pull down nearly every other house in the country as unfit for human habitation. Such statements carry their own refutation in their obvious absurdity.

A commoner figure in these estimates, but one only less exaggerated, is 1,000,000 houses. This figure has no foundation in fact. One could only get anywhere near it by jumping in all houses suitable for reconditioning as well as for clearance, adding a great many houses that are quite fit for habitation, but are not to the taste of whoever it is that is making the estimate, and then throwing Scotland into the bargain, which is not, of course, included in our figures. If we are to contemplate pulling down as a slum houses without compensation, every house that happens not to be in conformity with every housing expert's opinion of what a house should be in all respects, we shall get hopelessly adrift. The fact is that these swollen estimates are not based on proper and close investigation and accurate knowledge. They are usually no more than expressions of theories and impressions. We must concentrate the campaign on our essential task, which is to clear away and replace all houses so unfit for habitation that they can only be dealt with by clearance, and are not objects of compensation.

Other critics say that we are going too fast. Some, indeed, profess to be horrified at my precipitancy. The Government should have waited, they say, for another ten years before they made any direct attack upon the slums We should have gone on building houses for



Photograph, plan and section of the cupboard unit described in this page.

the wage earners at large, and then, in course of time, the slum dweller would have filtered up into them. Well, we have tried that policy for the last 14 years and the slums are as bad and as overcrowded as ever they were. Indeed, they are worse, being so many years older. It is time to try something else.

Other critics say that we are going too fast from the financial point of view. They say that if the Government has money to spare from the public revenues it should not devote it to increasing the amount spent on subsidies for slum clearance, it should devote it in the first place to restoring the cuts and reducing taxation. I have myself great sympathy with that. If there is money to spare, there is a very strong case to be made for its use in those ways. But the real answer is that there is not money to spare until we have provided for slum clearance.

The programme of slum clearance does not complete the whole programme of the slum campaign. In addition to the work of clearance there is that of reconditioning.

What is now needed is that the local authorities should survey the possibilities of reconditioning in their areas and form ordered plans for undertaking that reconditioning, if necessary, in a series of stages. They might, for instance, divide their decaying houses which threaten to become slums into classes according to their degree of decay, to be reconditioned in successive periods. In a normal case, such programmes should undoubtedly be co-ordinated with town planning schemes under the recent Act.

As you will have seen from His Majesty's speech on the occasion of the Opening of Parliament, it is the intention of His Ministers to introduce a measure to deal with this matter. I cannot, of course, anticipate its provisions today. This, however, may be said—that it will be the policy of the Government to strengthen the hands of local authorities to supplement the work of clearance with reconditioning work according to ordered programmes.

HOUSING IN FRANCE

Mr. F. R. Yerbury, in the fourth of the A.A.'s series of lectures on the housing problem, entitled "Housing Abroad," at 36 Bedford Square, on Saturday last, said :—

One result of the war has unquestionably been the forcing of the recognition of the right of every individual to be decently housed, and also of the right of the ordinary man in the street to the amenities which in the past were created by great artists and architects for the use of the few. The result of this can be seen in most countries in Europe.

One of the most interesting housing experiments which I know of is that I had an opportunity of seeing on the outskirts of Paris a few weeks ago. Here a system of construction invented by a French engineer has been adopted, and houses and blocks of flats are being built with a rapidity almost unknown before. One scheme at Bagneux, housing about 600 families, took six months to complete from the day of the commencement of the digging of the foundations until it was fully occupied by the people for whom it was intended. There is another at Drancy which offers a very interesting study. It consists of a number of blocks up to five storeys, with five great towers running up to fifteen storeys, there being four flats to each storey. The adoption of this system of housing virtually in skyscrapers is extremely significant, and it is the first time it has been adopted in Europe.

Many think that this offers the most practical solution for the future. The rapid building of such towers could be carried out by the clearance of a comparatively small part of a densely populated slum area, and immediately on completion could house the populace from the surrounding area, which could be cleared and turned into gardens and recreation places.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Non-Parlour Houses

Major Nathan asked the Minister of Health whether he could state the average superficial area of A type non-parlour houses, excluding small houses erected for aged persons under the Housing Act, 1930, and non-parlour flats, included in direct labour schemes and in contracts let by local authorities in England and Wales during each of the years 1929, 1930, 1931, 1932, and the period January to September, 1933, respectively.

Mr. Shakespeare, who replied, said that the average superficial areas for the periods in question were 766, 764, 758, 734 and 728 square feet respectively.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :—

Garage and coach station at Dorking (pages 702-704). General Contractors, H. G. Waters. Sub-contractors : A. and J. Main & Co., Ltd., constructional steelwork ; Wolverhampton Corrugated Iron Co., Ltd., Robertson's protected metal sheeting ; Mellowes & Co., Ltd. patent roof glazing ; Ragusa Asphalte Paving Co., Ltd., asphalte work ; Henry Hope and Sons, Ltd., lantern lights ; Williams and Williams, Ltd., steel window sashes ; E. J. Elgood, Ltd., granolithic floors ; Leeds Fireclay Co., Ltd., sanitary fittings ; Emerson & Norris, Ltd., artificial stone copings and cills ; R. W. Brooke & Co., Ltd., oak flooring ; Marbolith Flooring Co., Ltd., composition flooring ; A. L. Gibson, Ltd., steel roller shutters ; Comyn Ching & Co., Ltd., ironmongery, bronze metal sliding sashes and iron gratings and frames ; T. G. Jones & Co., Ltd., oak fencing ; Carter & Co. (London), Ltd., floor and wall tiling ; British Reinforced Concrete Co., reinforcement ; R. W. Brooke & Co., oak flooring ; R. G. Ward & Co., facing bricks.

Peterborough Municipal Buildings (pages 697-700). General contractors, John Thompson and Sons, Peterborough. Quantity surveyor, F. J. Clevely. Consulting engineer (steelwork), Burnard Geen, M.INST.C.E. Consulting engineer (heating and ventilating), J. Roger Preston, M.I.MECH.E. Sculptor, George Alexander, R.B.S. Sub-contractors : Samuel Butler & Co., steelwork ; Diespeker & Co., fireproof floors and terrazzo pavings ; Barford and Perkins, ventilating and heating engineers ; Norman and Underwood, plumbers and sanitary engineers ; Fenning & Co., marble work ; S.M.S. Express Lifts Ltd., lifts ; Grierson, electrical engineers ; James Gibbons, locks and furniture ; C. Harvey & Co., ornamental grills and metal work, electric light fittings, etc. ; G. Jackson and Sons, ornamental plaster work ; Luxfer, Ltd., Luxfer prism permanent lights ; Mellowes & Co., metal windows and roof glazing ; Roberts, Adlard & Co., roofing ; The Synchronome Co., clocks ; Sika-Francois, waterproofing ; Hollis Brothers, wood block floors and oak floors ; Adams-Hydraulics, sewage lift ; Chubb & Sons, strongroom doors ; F. Sage & Co., panelling to committee room and council chamber ; Val de Travers, asphalt roofs ; E. H. Evans, decorator of council chamber ceiling ; Boots Business Systems, general office furniture ; F. Tibbenham, Ltd., furniture for civic rooms ; Maple & Co., carpets and curtains.

Liverpool Architectural Society

Mr. Edward Maufe, F.R.I.B.A., addressed the Liverpool Architectural Society recently on "Modern Churches." He said that in the main architects must give what was demanded of them, so that if the public did not demand fine churches the architects of fine churches were not employed twice. "However, there does appear now to be considerable hope," he added. "Our danger is not one of dead replicas but of forms built primarily to surprise. This is a healthy sign, but buildings built from this motive alone are too narrowly dated. We must get something more fundamental than fashion. Churches, above all buildings, should aim at the eternal."

R.I.B.A. Prize Drawings at Cardiff

The South Wales Institute of Architects, in conjunction with the Welsh School of Architecture, the Technical College, Cardiff, recently held at Cardiff an exhibition of the R.I.B.A. Prize Drawings.

The display included the one-day sketch designs which were successful in the preliminary stage of the Tite Prize and Victory Scholarship competitions. These were felt to be of very special interest, showing as they do the standard which is reached by leading students in various parts of the country in rapidly producing a sketch design without any opportunity of receiving help of any kind, either in the form of friendly criticism or by reference to books, periodicals or the work of others.

Manufacturers' Items

The Sussex Brick Co., Ltd., of Horsham, have opened new offices and showrooms in London at 15/16 Carlisle House, Southampton Row, W.C.2.

*

We have received the following note from Messrs. Drytone, Ltd. :—

Messrs. Drytone, Ltd., wish to draw the attention of the architectural profession to the change of name recently adopted. This change has been made to avoid misunderstanding in the profession as to the character of the work carried out by the company. The company in future is to be known as Drytone Joinery, Ltd., and architects' enquiries for first-class joinery are asked for.

*

Messrs. Chase & Co., Ltd., of 36, Wilton Place, Knightsbridge, S.W.1, have removed to larger offices at 4, Halkin Place, Belgrave Square, S.W.1. The telephone number, Sloane 8410, is unchanged.

Obituary

A. S. WILSON

We regret to record the death of Mr. Arthur Sewell Wilson, Chairman of Messrs. John Freeman, Sons & Co., Ltd., of Wandsworth, S.W. Mr. Wilson entered the service of the company in 1895, and became Chairman in 1921.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

BERMONDSEY. *Tenements.* The L.C.C. has prepared a scheme for the clearance of the George Row area, and the erection of tenements, at a cost of £28,000.

BRENTWOOD. *School.* The Essex Education Committee has approved plans for the erection of a senior school in Sawyers Hall Lane, at a cost of £30,000.

CLAPHAM. *Flats.* The L.C.C. recommends the sale of surplus housing land in Poynders Road, Clapham, to Mr. A. F. Davies, for £17,500 for the erection of blocks of flats.

EALING. *Factories, Houses and Flats.* Plans passed by the Corporation: Factory extensions, Aintree Road, for Philco Radio Corporation; 51 houses, Church Road, Northolt, for Mr. H. A. Steel; four blocks of flats, Argyle Road, for Mr. B. De Helsby; 30 houses, Langdale Gardens, for Messrs. R. Lancaster and Son; 228 houses, Wood End Gardens, for Mr. J. M. Wilson; 10 houses, Thirlmere Avenue, for Mr. J. Marshall; 27 houses, Rydal Crescent, for Messrs. B. Smith and Son, Ltd.; 18 houses, Kingsmead Drive, for Messrs. Grainger Bros., Ltd.; factories and stores, Cambridge Road, for Mr. R. A. C. Churchward; eight houses, Ashbourne Close, for Messrs. Haymills, Ltd.; two houses, Ranelagh Road, for Messrs. C. Green and Sons; two houses, Mount Avenue, for Mr. H. J. Parker; four houses, Mayfield Gardens, for Mr. G. Marsh; two houses, Halsbury Road, for Mr. F. Evans; factory, Hanger Lane, for Arrow Electric Switches, Ltd.; extensions, Heinz factory, Waxlow Road, for Mr. Harold Goslett; 15 blocks of flats, Hanger Lane, for Messrs. T. P. Bennett and Son.

HACKNEY. *Tenements.* The L.C.C. is to clear an area in the vicinity of Northwold Road, and erect tenements at a cost of £18,000.

LEWISHAM. *Houses and Shops.* Plans passed by the B.C.: Houses, Perry Hill, Catford, for Dr. Greenop; workshop, Sandhurst Road, Catford, for Mr. F. Bailey; two houses, Duncombe Hill, for Mr. F. Harper: five houses, Cambridge Road, for Messrs. Thomas Allen (Lee), Ltd.; houses, Sydenham Park Road, Sydenham, for Messrs. Brett and Son; shops, Sydenham Road, Sydenham, for Mr. G. T. Harman.

SELSDEN. *Shops, Houses and Streets.* Plans passed: Three shops, Addington Road, for Mr. J. A. Lovell; 13 shops, Addington Road, for Mr. A. Frampton; four houses, York Road, for Mr. G. Burgess; two new streets, off Addington Road, for Messrs. R. Costain, Ltd.

SEVERELLS. *Cottages.* The Essex C.C. has approved plans for the erection of 54 cottages for the staff at the Severells mental colony, at a cost of £18,090.

SWANSCOMBE. *Swimming Bath.* The U.D.C. has asked the surveyor to prepare plans for the erection of an open air swimming bath, with filtration plant, on a site near the Whiting works.

WATFORD. *Houses and Dairy.* Plans passed by the Corporation: Dairy, St. Alban's Road, for the Express Dairy Co.; four houses, Bradshaw estate, for Mr. W. T. Simmons; six houses, Parkside Drive, for Mr. J. Randall; 24 houses, Kingswood Estate, for Hillingdon Estate Co.

SOUTHERN COUNTIES

PAIGNTON. *Houses and Shops.* Plans passed by the U.D.C.: Shops, Torbay Road, for Messrs. German and Son; two houses, Barcombe Road, for Mr. F. Binmore; four houses, Hilton Crescent, for Mr. H. Proctor; two houses, Eden Vale Road, for Messrs. A. Matthews, Ltd.; 15 houses, Sparks Barn Road, for Mr. F. G. Stockman; four flats, Eugene Road, for Messrs. A. and E. Diggines; two houses, Eugene Road, for Messrs. Scriven and West; workshops, Palace Avenue, for Torquay Gas Co.; five houses, Woodland Park, for Messrs. Wallis, Underhay & Co.; 10 bungalows, Brixham Road, for Messrs. R. H. Peeke and Son; six houses, Blatchcombe Road, for Messrs. Diggines Bros.

PORTLAND. *Houses.* The U.D.C. has decided to put forward a programme to the Ministry of Health, providing for the building of 22 houses per annum for the next five years.

PORTSMOUTH. *Swimming Pool, etc.* Portsmouth Corporation Finance Committee has considered a scheme for the development of the Lumps Fort site providing for the levelling of the site, the erection of a large hall capable of seating 2,000 persons, with a restaurant and café, museum and picture gallery for rehousing the existing collection at Cumberland House, an open-air bathing pool of championship size, with ample provision for spectators and sun-bathing, shelters, arrangements for parking of motor vehicles, and the necessary approach roads, etc., at an estimated cost of £200,000. The Committee submits the scheme, which it feels can well be carried out in successive portions, for the consideration of the Council and recommends that the city engineer be authorised to proceed with the preparation of detailed working drawings and estimates for a bathing pool at a provisional estimated cost of £50,000, with a view to tenders being invited forthwith for this portion of the scheme.

MIDLAND COUNTIES

HANLEY. *Houses.* Plans passed: Two houses, Cromwell Road, for Mr. B. Stubbs; three houses, Birch Street, for Messrs. Tideswell Bros.; eight houses, Jasper Street, for Mr. A. W. Rushton; six houses, Boulton Street, for Mr. E. Harris.

STOKE-ON-TRENT. *Houses and Shops.* Plans passed by the Corporation: Two bungalows, Turnhurst Road, for Mr. C. Sutton; eight houses, Summerville Road, for Mr. J. H. Summerfield; shop and alterations to cinema, Stoke Road, for Victoria Cinema, Ltd.; two houses, Levita Road, for Messrs. P. Bailey & Co., Ltd.; painting and casting shop, Copeland Street, for Messrs. Shorter and Son; 12 houses, Fielding Street, for Messrs. Holloway & Co.; two houses, Wilson Road, for Mr. E. Johnson; 34 houses and three shops, Victoria Square, Fenton, for Col. H. Clive; two houses, Sandon Road, for Mr. J. Bartholomew; 14 houses, Stone Road, Lightwood, for Mr. K. Lowndes; two houses, Hartshill Road, for Mr. E. Jones; church hall, Sandon Road, Meir, for Methodist Church trustees; six houses, High Street, Newfields, for Mr. H. Gilbert; four houses, off Brough Lane, for Messrs. Cooper and Jones; eight houses, off Leek New Road, for Messrs. Leese and Peers; two houses, Weston Coyney Road, for Mr. W. Simcock; 16 houses, Lower Spring Road, Longton, for Messrs. Salt and Clowes.

NORTHERN COUNTIES

BLACKPOOL. *Houses, Swimming Bath, Shops, etc.* Plans passed by the Corporation: 49 houses, Dorchester and Leckhampton Roads, for Messrs. G. Hodgson and Sons, Ltd.; 81 houses, Grasmere Road, for Mr. W. Hornby; six houses, The Close, Cleveleys, for Mr. A. A. Holt; four houses, Wetherby Avenue, for Mr. W. H. Snape; 12 houses, Bethel Avenue, for Mr. R. H. Cunliffe; 12 houses, Buckley Crescent, for Messrs. Kennard and Mills; 32 houses, Ventnor Road, for Messrs. A. and G. Fletcher; three houses, Caunce Street, for Messrs. Cardwells; two houses, Westcliffe Drive, for Mr. N. Rideout; 55 houses, North Drive, Luton Road, for Messrs. R. and H. Fletcher; 12 houses, Valeway Avenue, for Messrs. D. Chadwick & Co.; two houses, Layton Road, for Mr. B. Lloyd; two houses, Luton Road, for Messrs. Findlay and Watson: four shops, Ansdall Road, for Messrs. J. J. and S. Hayes, Ltd.; 50 houses, Repton Avenue, for Messrs. R. Fielding and Son; 20 houses, Senior Avenue, for Messrs. M. E. Senior and Son; four houses, Queen's Drive, for Mr. P. Wood; swimming bath, café and shops, Lytham Road, for Mr. A. T. Gott; five houses and shops, Westcliffe Drive, for Mr. N. Rideout.

DEWSBURY. *Houses, Shops and Offices.* Plans passed by the Corporation: Two houses, Grasmere Road, for Mr. E. R. Foggo; four houses, Hobart Road, for Mr. R. Laycock; four houses, Staincliffe Road, for Mr. P. Asquith; four houses, Brunswick Street, Westborough, for Mr. S. H. Greenwood; four houses, Bennett Lane, for Mr. J. Crossley; two houses, White Cross Road, for Messrs. G. F. Fligg and Son; 11 houses, off North Road, Ravensthorpe, for Messrs. Mitchell Bros.; offices, Huddersfield Road, Ravensthorpe, for Messrs. Hartley Bros., Ltd.; shop, Lees Hall Road, for Mr. M. Grace; new street, Rathlin Road, Shaw Cross and Hobart Road, or the trustees of the Savile (Yorks.) estate.

MORECAMBE. *Houses, etc.* Plans passed by the Corporation: Pavilion, Carr Lane, for Heysham Cricket Club; 45 houses, Hyde Road, for Messrs. Edmondson Bros., Ltd.; four bungalows, off Ellesmere Road, for Messrs. Wm. Gardner & Co., Ltd.: two houses, Regent Park Avenue, for Mr. G. W. Ormerod; 16 houses, Hanson Avenue, and two houses, Broadway, for Messrs. H. Hillman and Son; vestry and boiler house, Bethel Temple, Lancaster Road, for Evangelistic Society; 18 houses, Twemlow Parade, for Messrs. Swithenbank and Ladell; additions, St. Christopher's Church, Bare, for Messrs. Austin and Paley.

SHEFFIELD. *School and Swimming Bath.* The Education Committee has voted an estimate of £71,000 for the erection of an elementary school on the Woodthorpe estate. A swimming bath is included at a cost of £9,000.

SHIPLEY. *Houses, Workshops, etc.* Plans passed by the U.D.C.: Office, workshop, etc., Manor Lane, for Messrs. J. E. Wilkinson and Sons; four houses, Poplar Road, for Messrs. Dobby and Richmond; six houses, Taunton Street, for Messrs. Wm. Pitts and Sons; 40 houses, Wrose Road, for Wrose Hill Estate Co., Ltd.; kiln extensions, Wrose Brow Road, for Messrs. J. E. Briggs and Sons; four bungalows, Moorhead Crescent, for Mr. C. Houlden.

SOUTH SHIELDS. *Houses, Shops and Flats.* Plans passed by the Corporation: Nine houses, West Avenue, for Messrs. J. H. Morton and Son; lookout tower, South Pier Works, for Tyne Improvement Commissioners; two houses, off Armstrong Avenue, for Mr. R. W. Weir; 55 houses, Banbury Terrace, 12 houses, Morpeth Avenue, and 13 houses, Talbot Road, for Mr. F. W. Newby; three shops, Prince Edward Road, for Messrs. T. A. Page and Son; 16 houses, off Corney Street, for Mr. R. M. Chapman; bungalow, Quarry Walk, for Mr. Alf Eltringham; four bungalows, off West Avenue, for Messrs. R. Thornton and Son; houses, Thames Street, for Mr. Bowman; bank, shop and flats, Sunderland Road, for Martins Bank, Ltd.; shop and house, Sunderland Road, for Miss Almond; shop and flat, Prince Edward Road, for Mr. G. McKie; shop and flat, Prince Edward Road, for Messrs. J. Caplan and Sons.

WALLASEY. *Town Hall.* The Corporation has included in the capital expenditure programme for the next five years, the following schemes: Extension to town hall, £20,000; improvement to plateaux, etc., town hall, £500; civic centre, Moreton: buildings, £60,000; land, £5,000; recreation grounds, £5,000; town hall garage, Queen's Road, £5,000.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	BANBURY	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B_3	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5½	1 1¼
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A_1	Buxton	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A_3	Cumberland	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
A_2	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	HALIFAX	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	JARROW	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A_2	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	LANCASTER	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 [illegible]	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH	N.W. Counties	1 4½	1 0½
A	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	PAISLEY	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N.W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	TAMWORTH	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	1 5½	1¼
A	Tyne District	N. E. Coast	1 5½	1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A_3	Worksop	Yorkshire	4	1 0
A_1	Wrexham	N.W. Counties	5	1 0¾
A_3	Wycombe	S. Counties	4	1 0
B_1	YARMOUTH	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
White Portland Cement	,,	8	15	0
Thames Ballast	per Y.C.		6	3
¾" Crushed Ballast	,,		6	9
Building Sand	,,		7	3
Washed Sand	,,		8	3
2" Broken Brick	,,		8	0
¾" ,, ,,	,,		10	3
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	8	17	6
,, Wirecuts	,,	7	17	6
,, Brindles	,,	7	0	0
,, Bullnose	,,	9	0	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	7	10	0
Luton Facings	,,	7	10	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	0	0
Headers	,,	20	10	0
Bullnose	,,	27	10	0
Double Stretchers	,,	29	10	0
Double Headers	,,	26	10	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	4½
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	6
,, ,, ,, 3"	,,	2	0

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	28	17	6
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		18	6
,, ⅞"	,,	1	1	6
,, 1"	,,	1	2	0
,, 1¼"	,,	1	5	0
,, 1½"	,,	1	10	0
Deal matchings ½"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	$\frac{3}{16}$"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1¼"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	,,	8	6
,, ,, ⅜"	,,	8	3
,, ,, ½"	,,	8	0
,, ,, ¾"	,,	7	6
,, ,, ⅞"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		8		10
Shoes	each	2	0	3	0
Anti-splash shoes	,,	4	6	8	0
Boots	,,	3	0	4	0
Bends	,,	2	7	3	9
,, with access door	,,	—		6	3
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	3	9	6	0
Plinth bends, 4½" to 6"	,,	3	9	5	3
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		6
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	0	6
,, drawn pipes	,,		17	6
,, soil pipe	,,	1	0	6
,, scrap	,,		11	0
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			8½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	0	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2½
,, ,, 26 oz. ,, ,, ,,	,,					3½
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
⅛" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	2	6	0
,, ordinary	,,	2	0	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		10	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
„ to reduce levels n/e 5′ 0" deep and cart away	Y.C.		8	6
„ to form basement n/e 5′ 0" deep and cart away	„		9	0
„ „ 10′ 0" deep and cart away	„		9	6
„ „ 15′ 0" deep and cart away	„		10	0
If in stiff clay	add „		2	6
If in underpinning	„ „		4	0
Planking and strutting to sides of excavation	F.S.		1	0
„ „ to pier holes	„			5
„ „ to trenches	„			5
„ „ extra, only if left in	„			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	„	1	6	0
„ „ (4-2-1)	„	1	12	6
„ „ underpinning	„	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and grating	„	16	6	18	0
Cast iron drains and laying, and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	27	10	0
„ „ in cement	„	28	15	0
„ Stocks in cement	„	35	0	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			8½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	„	6	9
¾" paving or flat	„	4	0
1" paving or flat	„	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

			s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	„	3	7	0
Do., 24" × 12"	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles	„	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	„	4	6	6
„ „ „ „ „ „ (green)	„	4	15	0

CARPENTER AND JOINER

		£	s.	d
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" „ „ „ „	„	1	17	6
1¼" „ „ „ „	„	2	3	0
¾" × 2" fir battening for Countess slating	„		9	6
Do. for 4" gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" „ „ „ „ „	„		1	6
2" deal wrought rounded roll	F.R.			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼" do.	„	2	10	0
1½" do.	„	2	17	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1¼" do.			1	9

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	9½
2" „ „	„	1	11½
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	3	7
2" „ „ „	„	3	10
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" „ „ „	„	2	8
1½" „ but moulded both sides	„	2	4
2" „ „ „	„	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	0
4½" × 3½" „ „	„	1	4
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½" deal moulded wall strings	„	2	1
1½" „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" „ „	„	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement ½" and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	0
Do. in flashings		1	17	6
Do. in covering to turrets, etc.	„	2	3	6
Do. in soakers	„	1	9	6
Labour to welted edge	F.R.			3½
Open copper nailing	„			3½
Close „ „	„			4½

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	„	6½	8	9	11	1	—
Boiler screws and unions	„	3 3	3 9	5 0	8 0	—	—
Lead traps	„	—	—	—	6 3	8 9	—
Screw down bib valves	„	6 9	9 6	11 0	—	—	—
Do. stop cocks	„	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

			s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	8
Do. vertical	„		2	1
Rough render on walls	„		1	3
Render, float and set in lime and hair	„		1	11
Render and set in Sirapite	„		2	1
Render, backing in cement and sand, and set in Keene's cement	„		2	10
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R.			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1" girth	„			1½
1" granolithic pavings	Y.S.		3	6
1½" „	„		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	„		17	6
9" × 3" „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	„	2	9

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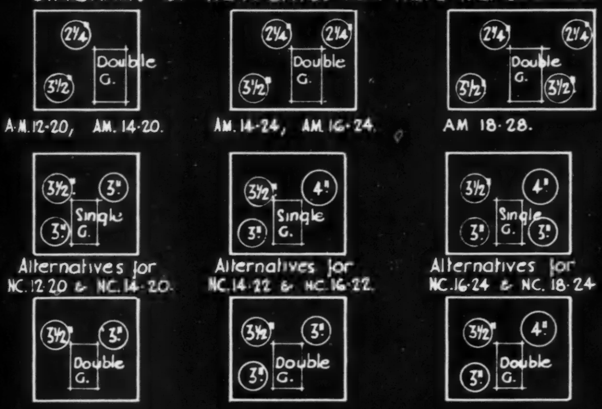
DIAGRAMS OF HOTPLATES FOR A.M. & N.C. COOKERS.


2¼
3½
Double G.
A.M.12-20, AM. 14-20.
2¼
2¼
3½
Double G.
AM. 14-24, AM. 16-24.
2¼
2¼
3½
3½
Double G.
AM 18-28.
3½
3"
3"
Single G.
Alternatives for NC. 12.20 & NC. 14-20.
3½
4"
3"
Single G.
Alternatives for NC. 14-22 & NC. 16-22.
3½
4"
3"
3"
Single G.
Alternatives for NC. 16-24 & NC. 18-24
3½
3"
Double G.
3½
3"
3"
Double G.
3½
4"
3"
Double G.

FINISHES FOR AM. & NC. MODELS.

1. Fine cast & blacked.
2. Mottled porcelain enamel. (Standard finish)
3. Speckled porcelain enamel.
4. Full colour porcelain enamel (4 alternative colours)

FINISHES OF BRASSWORK.

1. Plain brass
2. Nickel plated
3. Chromium plated.

PARTS SUPPLIED WITH STANDARD COOKER.

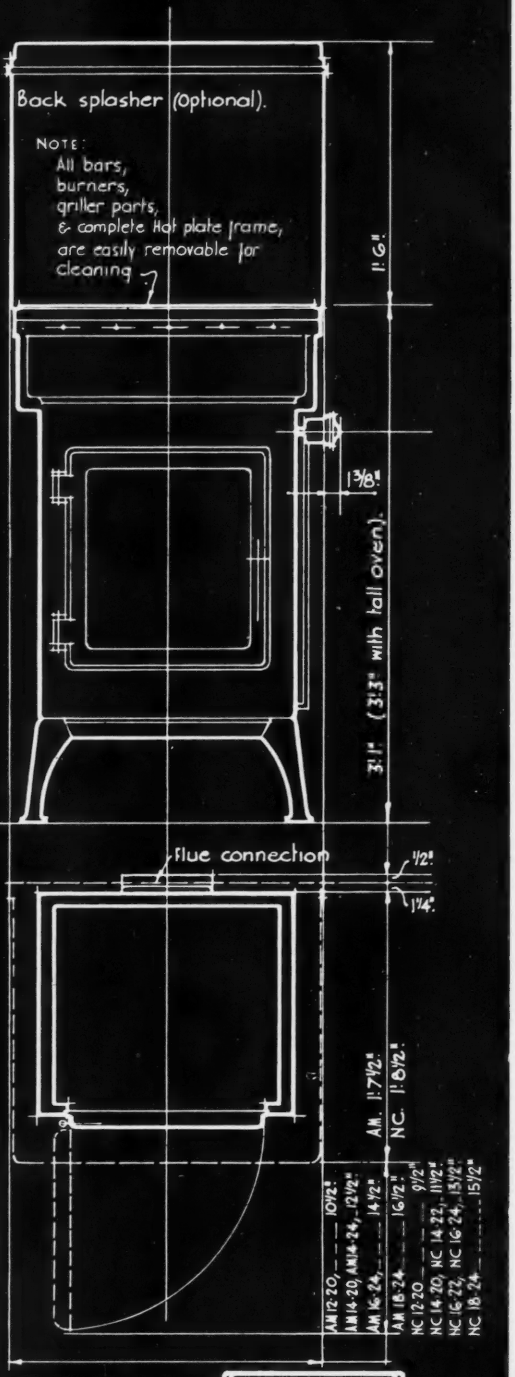
Removable hotplate on AM. model.
Thermostat to oven__________may be omitted.
Nickel plated brasswork________unplated or chromium.
Drop lever oven tap__________or fixed lever tap.
Tinned grill pan & grid________or enamelled.
White enamelled tray under hot plate
White enamelled panel in door____or glass
Packed body & door________packing may be omitted.
Top bars & burners in best black stove enamelled finish____or fine cast & blacked.
Oven, standard height_________or tall oven.

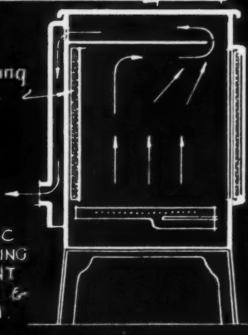
EXTRAS: back splasher
Single or double plate rack.

NOTE: All parts & finishes are standardised and supplied from stock.

TABLE OF DIMENSIONS OF AM. & NC. COOKERS.

Number of Cooker.	Capacity (No. of persons)	Diam. of supply	Door opening width	Door opening height	Oven, inside. width	Oven, inside. height	Hotplate width	Hotplate burners large	Hotplate burners medium	Hotplate burners small.	Grille.
AM. 12-20.	1. to 4.	½"	1' 0"	1' 3"	1' 2"	1' 6¼"	1' 8"	1.	.	1.	1. double
AM. 14-20.	3. to 6.	½"	1' 2"	1' 3" 1' 7"	1' 4"	1' 6¼" 1' 8"	1' 8"	1.	.	1.	1. double
AM. 14-24.	3. to 6.	½"	1' 2"	1' 3" 1' 7"	1' 4"	1' 6¼" 1' 8"	2' 0"	1.	.	2.	1. double
AM. 16. 24.	5. to 9.	½"	1' 4"	1' 3" 1' 7"	1' 6"	1' 6¼" 1' 8"	2' 0"	1.	.	2.	1. double
AM. 18 28.	8. to 12.	½"	1' 6"	1' 3" 1' 7"	1' 8"	1' 6¼" 1' 8"	2' 4"	2.	.	2.	1. double
N.C. 12. 20.	1. to 4.	½"	1' 0"	1' 3"	1' 2"	1' 6¼"	1' 8"	. .	1. 1.	2. 1.	1. single. 1. double.
NC. 14. 20.	3. to 6.	½"	1' 2"	1' 3" 1' 7"	1' 4"	1' 6¼" 1' 8"	1' 8"	. .	1. 1.	2. 1.	1. single. 1. double.
NC. 14-22.	3. to 6.	½"	1' 2"	1' 3" 1' 7"	1' 4"	1' 6¼" 1' 8"	1' 10"	1. .	1. 1.	1. 2.	1. single 1. double.
NC. 16-22.	5. to 9.	½"	1' 4"	1' 3" 1' 7"	1' 6"	1' 6¼" 1' 8"	1' 10"	1. .	1. 1.	1. 2.	1. single 1. double
NC. 16-24.	5. to 9.	½"	1' 4"	1' 3" 1' 7"	1' 6"	1' 6¼" 1' 8"	2' 0"	1. 1.	1. 1.	2. 1.	1. single 1. double
NC. 18-24.	8. to 12.	½"	1' 6"	1' 3" 1' 7"	1' 8"	1' 6¼" 1' 8"	2' 0"	1. 1.	1. 1.	2. 1.	1. single 1. double


Back splasher (Optional).
NOTE:
All bars,
burners,
griller parts,
& complete Hot plate frame,
are easily removable for
cleaning
1' 6"
1⅜"
3' 1" (3' 3" with tall oven).
flue connection
½"
1¼"
AM. 1' 7½"
NC. 1' 8½"
AM 12-20, ———— 10½"
AM 14-20, AM 14-24, ——12½"
AM 16-24, ———— 14½"
AM 18-24 ———— 16½"
NC 12-20 ———— 9½"
NC 14-20, NC 14-22, —— 11½"
NC 16-22, NC 16-24, —— 13½"
NC 18-24 ———— 15½"


Cellular asbestos lining

DIAGRAMMATIC SECTION SHOWING FLAVELS PATENT FLUE SYSTEM & CIRCULATION.

Information from Sidney Flavel & Co Ltd.

INFORMATION SHEET: FLAVELS AM. & NC. GAS COOKERS.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 57 •

GAS COOKER

Name of Product :	Flavels' Leamington Stoves.
Type Illustrated :	Flavel Gas Cooker.

Description :

This Gas Cooker is designed and built primarily for low initial cost and simplicity of renewal and maintenance, while retaining the maximum efficiency and capacity as evidenced by the proportions of the burners to the oven dimensions.

The patent flue system (see section overleaf) is an example of the special construction ; and the patented removable steel hotplate frame provides additional cleaning facilities.

The interchangeable series consists of four widths of hotplates in two styles, and four widths of oven in two heights.

Further examples of Flavels' Leamington Stoves are to be shown in future Sheets.

Name of Manufacturers	Sidney Flavel & Co. Ltd.
Address	Eagle Foundry, Leamington
Telephone	100 Leamington
London Showrooms	The Welbeck Street Fireplace Galleries, 38 Welbeck Street, London, W.1
Telephone	Welbeck 2838

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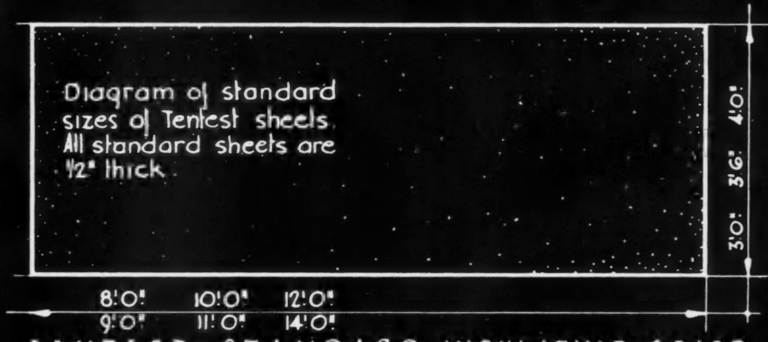

TENTEST STANDARD INSULATING BOARD.

PACKING:
3'0" widths are packed
8 sheets to the bundle
3'6" widths are packed
7 sheets to the bundle.
4'0" widths are packed
6 sheets to the bundle

Standard sizes of sheet may be obtained also from ½" to 2" thick, to order

SUMMARY OF PARTICULARS.

USES:	for sound insulation, heat insulation, acoustic correction, condensation prevention, damp elimination, on floors, walls, ceilings, roofs, etc..	INSULATION (Thermal.)	The Heat conductivity is approx. equal to that of cork, being 0·38 B.T.U. per square foot per hour for 1" thickness & 1° F. difference in temperature.
		INSULATION (Sound.)	The Coefficient of absorption of sound is 0·35 (as calculated from Sabine's formula from tests made over an average range.
PROPERTIES	permanence, fire retarding, immune from insect action, water-proofed, sound absorbent, heat insulating, homogeneous, not laminated.	FINISHES (internal.) (external.)	left plain - with butted joints. or/ with cover fillets. any applied decoration, e.g. paint, distemper, paper, plaster etc. cement rendering rough cast, etc.
WEIGHT	Standard sheets ½" thick weigh 72 lbs. per 100 sq. ft.	JOINTING	Tentest jointing strip: rolls 100'0", 2½" wide, 2/7' per roll. Anaglypta strip: rolls 100'0", 1¾" wide, 3/6' per roll. Wire gauze: rolls 100'0", 4" wide, 5/3' per roll.
STRENGTH.	In deflection, a centrally applied load of 135 lbs. was required to break a specimen 12" wide at a span of 24". In tension the ultimate breaking stress was 268 lbs. per square inch		
COST	delivered within the customary area, or/ to nearest station. Standard sheets: for complete bundles, 3 pence per sq. ft. nett. for less than a bundle of any size 3¼ pence per sq. ft. nett.	NAILS.	1¼" galvanised slaters' nails at edges 1¼" galvanised cut clasp nails at intermediates. Nails required per 100 sq. ft.: with studs at 16" centres. if slaters nails throughout 379 nails or 2¾ lbs. if slaters nails at edges 201 nails or 1½ lbs. & cut clasp nails at intermediates 78 nails or ⅓ lb.

Information from the Tentest Fibre Board Co. (1929) Ltd.

INFORMATION SHEET: TENTEST INSULATING BOARD.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

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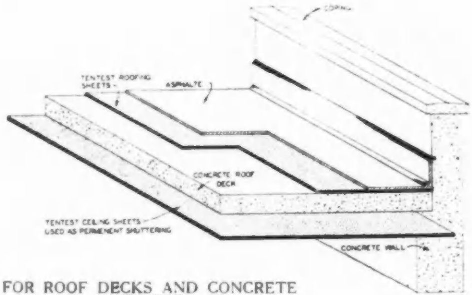
INFORMATION SHEET

• 58 •

WALLBOARD

Name of Product : TenTesT Fibre Board

Type Illustrated : Roofing


COPING
TENTEST ROOFING SHEETS
ASPHALTE
CONCRETE ROOF DECK
TENTEST CEILING SHEETS USED AS PERMANENT SHUTTERING
CONCRETE WALL

FOR ROOF DECKS AND CONCRETE CEILINGS.

Description :

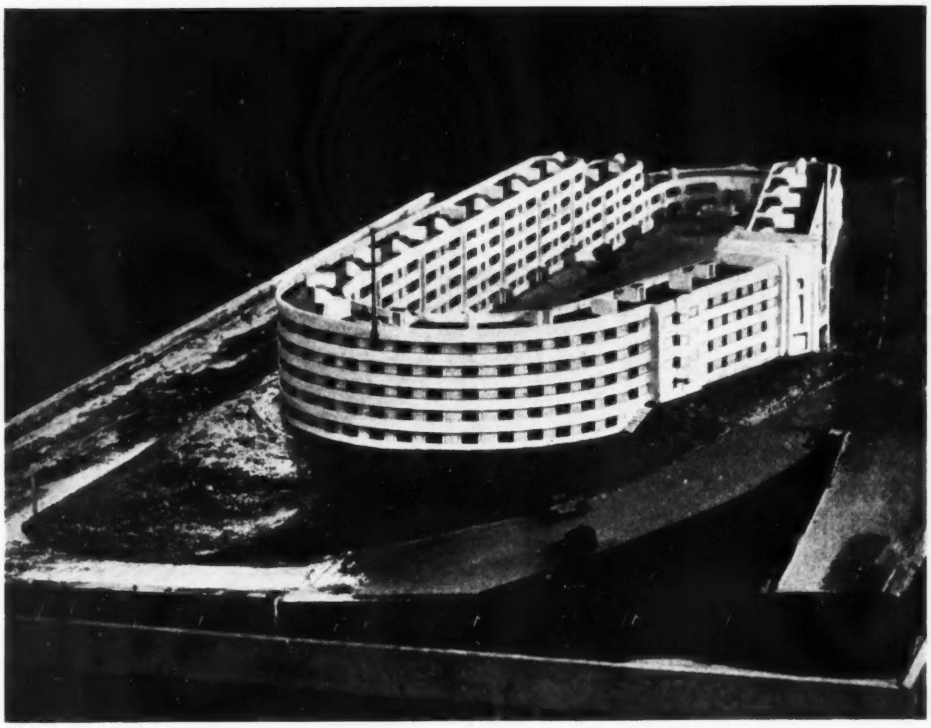
The heat-resisting properties of TenTesT are based on an accepted co-efficient of conductivity established by the National Physical Laboratory. That co-efficient represents the percentage of heat, expressed in British Thermal Units, that will pass, in one hour, through a 1" thickness of the material 1 sq. ft. in area, per 1° F. difference in temperature between the two faces.

In the case, for instance, of a concrete roof flat, the substitution of a ½" TenTesT ceiling—for an ordinary plaster ceiling—would result in a reduction of 0.068 in the co-efficient of conductivity. The application of a ½" layer of TenTesT between the asphalt or built-up roofing finish and the concrete would still further reduce the co-efficient of conductivity by 0.045.

Name of Manufacturers	TenTesT Fibre Board Co. (1919) Limited
Address	Astor House, Aldwych London, W.C.2
Telephone	Holborn 8018

HOUSING IN MANCHESTER

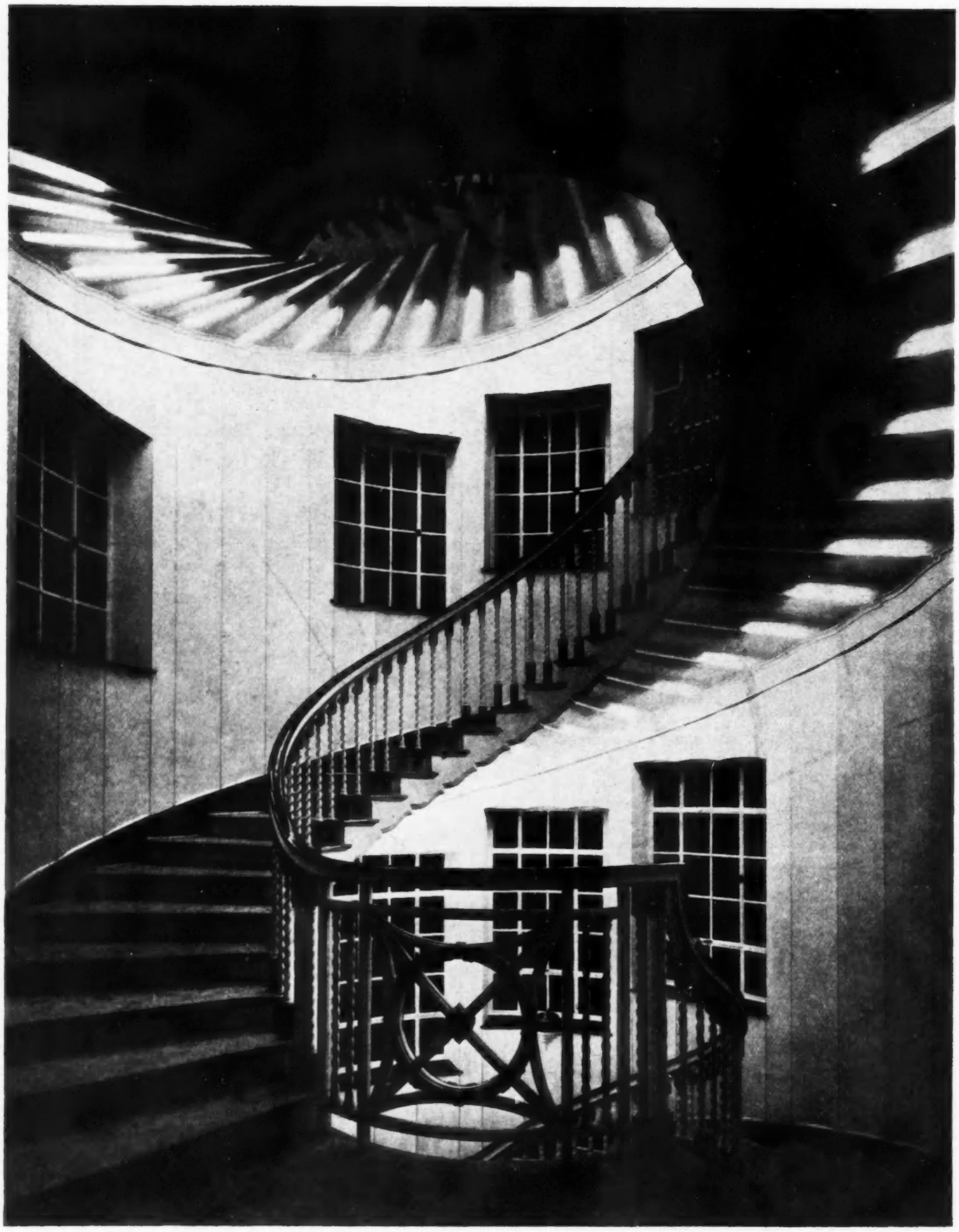
MODEL SHOWN TO THE MINISTER



THIS model of a block of flats which Manchester is proposing to erect in Smedley Lane, Cheetham, was inspected by Sir Hilton Young, the Minister of Health, when he visited Manchester recently to open the City's 20,000th municipally built house.

The model was made by Mr. Leonard Heywood (the Manchester Housing Director) and a member of his staff.

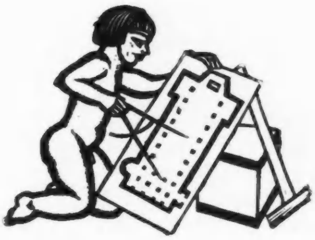
" The Minister," says a local paper, " was very interested in the model."



CIRCULAR STAIRCASE

This circular staircase (with the lifts adjoining) has recently been finished to form the principal communication between the floors of Messrs. Heal's showrooms, Tottenham Court Road, London. It has been designed by Smith and Brewer, the architects for the original building, and is an extension of an old staircase which previously served only up to first floor level.

The brick drum (16 ft. in diameter), of which the old staircase was constructed, has been retained; and the new structural work carried out in reinforced concrete, consisting of a hollow concrete wall with a continuous spiral beam with which the cantilever steps are cast in situ. Lighting is by tubular lamps set into the wide portion of each step, and by concealed lighting in the concrete dome above fourth floor level. The finishings and balustrade are in wood.



THE TRUTH ABOUT THE 1935 INDUSTRIAL ART EXHIBITION

WHEN we discussed the prospects of the 1935 Exhibition of British Art in Industry three weeks ago in a leading article, we stated that the success of the collaboration between the Royal Academy and the Royal Society of Arts depended upon the composition of the selection committees, and upon the mental outlook of the organizers. We were, perhaps, rather pessimistic about the organizers because of the ostentatious avoidance of any reference to the Dorland Hall Exhibition on the occasion of the Royal Society of Arts dinner, when Sir William Llewellyn and Mr. John A. Milne, Chairman of the R.S.A. Council, spoke of industrial art with the air of twin Columbuses discovering a new world of human activity. But whatever the guiding lights of those great and influential organizations, the Royal Academy and the Royal Society of Arts, know or do not know of industrial design and the work that has been done for its betterment by public-spirited bodies and invididuals, their choice of Mr. John de la Valette as an organizer for the 1935 Exhibition has satisfactorily established the attitude that will be officially taken towards the selection of exhibits.

Mr. John de la Valette was one of the guests at the annual dinner of the Design and Industries Association, which took place last Friday at the Café Royal, London, with Mr. Frank Pick presiding. In replying to the toast of the guests, Mr. de la Valette made some penetrating remarks about industrial art and the character of the 1935 Exhibition. With the experience of months of work behind him, he was able to isolate the significant fact that manufacturers who want to participate in the Exhibition by submitting their products to the selection committee are constantly asking for a lead as to what they shall design for the occasion. Those requests for guidance do suggest that industry is in a receptive state of mind concerning design. It also suggests that educational work should be undertaken, or at least facilities for advisory work provided by some authoritative body to help industrial administrators to solve this very perplexing problem of how and when to employ designers, and whom to employ. Joint action by the Royal Society of Arts, the Society of Industrial Artists and the Design and Industries Association could well be taken ; but perhaps the most effectual action could be taken by the R.I.B.A., for architects, the only designers trained to know and handle a diversity of materials, should be responsible for all branches of design, as they were in the eighteenth century.

Industry is willing. Not only do the words of Mr. John de la Valette prove that, but there are examples in many branches of industrial production of tentative experiments in the employment of designers. The 1935 Exhibition will record the progress of those experiments, unless there is any obstruction in selection.

It is fortunate that such a virile and scholarly character as Mr. John de la Valette is available for the guidance of that Exhibition. From his speech it could be gathered that he deprecated the fact that some journalist had disclosed the average age of the Council of the Royal Society of Arts. It compelled him to make a not entirely tactful defence of the ripe rhythms of middle age. Among other things, he said that ageing Generals would never dream of employing only the old soldiers who had served them in their youth ; they encouraged the use of young men. Those who fought for England during the Great War might retort that there's nothing an old General likes better than having plenty of young men available for slaughter ; and we only hope that this will not apply to the veterans of art who are to sit in judgment upon young ideas in this Exhibition. Will they kill them ? Will they understand them ? Do any of the grand old men of design know that anything has happened at all since before the war, except a few unexceptional posters for indiscriminating railway companies painted by R.A.'s ?

But on the side of good design we have the penetration, vigour and informed discrimination of Mr. John de la Valette, whose work is so well known, and whose present activities will put the whole business of industrial art on a better and more respectable, nay, more gentlemanly, footing in England.

The Architects' Journal
9 Queen Anne's Gate
Westminster, S.W.1
Telephones: Victoria
9 2 1 2 - 7
Telegrams:
Buildable
Parl
London

NOTES & TOPICS

THE D.I.A. DINNER

IN the du Maurier days of *Punch*, post-prandial orators were one of the jokes. Today the joke is wearing thin. Why do after-dinner speakers still insist on going on too long? I am moved to these remarks by the complaints of my fellow guests at the annual dinner of the Design and Industries Association held at the Café Royal last Friday.

*

Dr. Burgin seemed long. Mr. Frank Pick seemed longer. He appeared to have nothing to say except that he disliked being treated with respect. Mr. Henry Strauss spoke for twenty-nine minutes by my neighbour's watch. Even so, his speech seemed shorter than Mr. Pick's. Mr. de la Valette stood on his feet for what seemed hours. Alone among them all, Mr. James Laver produced a speech which was a model of wit and brevity.

*

I would ill-naturedly suggest that those who speak at dinners should interpret fitness for purpose by employing economy of means.

THE BOARD OF TRADE AND THE D.I.A.

Dr. Leslie Burgin, Parliamentary Secretary to the Board of Trade, announced that the Board of Trade had decided to set up a committee to deal with industrial art, and that Mr. Frank Pick, the President of the D.I.A., had accepted the chairmanship.

*

This official recognition of the economic importance of design is encouraging, especially at a time when the most casual inspection of the Christmas gifts our great storekeepers wish us to thrust upon our reluctant friends has started to depress us almost as much as Christmas-time expenses.

*

It would have been impossible to make a better choice than Mr. Pick. Incidentally, I noticed that a complete length of table separated Mr. Pick from Mr. Yerbury at that dinner; no doubt, as a distinguished architect remarked: "to prevent any *adequate* discussion of design in Bedford Square."

*

I couldn't help wondering how many architects belong to the D.I.A. There were dozens, and all of them indignant. They were lashed into this constructive state of mind by Mr. Henry Strauss—who spoke brilliantly, but even caviare loses its peculiar charm when one is forcibly fed with it. But it was not his loquacious continuity that aroused architectural indignation. It was his picture of the architectural ineptitudes under which we suffer so helplessly.

A NON-TUDOR BRITISH LINER

Mr. Strauss made a grand suggestion regarding the new Cunarder. Let Government assistance for its completion be conditional upon decently designed interior architecture; no sham Tudor or Jerrybeathan effects.

*

Mr. John de la Valette, the talented organizer of the 1935 Exhibition of Industrial Art, threw cold water over this idea later. Shipowners only went Tudor because it was demanded, he said. *The ladies liked it.*

*

Poor dear feminine things. So easily taken in by their surroundings. The theory propounded by Mr. de la Valette was, roughly, give them an inglenook and they won't need a basin.

*

I assume that Mr. de la Valette possesses that exquisite internal chemical adjustment which makes him a good sailor. Speaking as an indifferent sailor myself, I know my indisposition would be accelerated rather than delayed or indefinitely postponed by "Louis" or "Jaco" surroundings.

*

Come, come, Mr. de la Valette, it was ungallant of you to blame the ladies in your courteous endeavour to excuse the shipowners. We expect you to do better than that with the great exhibition of 1935.

*

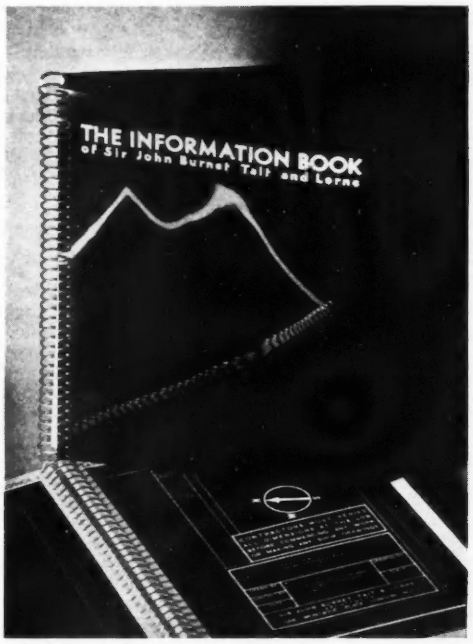
By the way, who are the ladies acting on the various selection committees? Could we have their names?

THE BUILDING SOCIETIES CAN'T DO IT

Mr. M. I. Michaels, who is assistant secretary to the New Survey of London Life and Labour, has been writing in *The Week End Review* under the title "Mr. Owner *v.* Mr. Tenant," an analysis of Building Society operations since the war.

*

It seems clear that the Building Societies have never for one minute attacked the problem of housing the lower class of wage earners, and that in the period following the war the whole nature of their undertakings has changed



The Information Book, just published; see Astragal's note on this page.

and the working class form a much smaller proportion of their depositors.

*

In the future, in short, to quote Mr. Michaels, " the organisation of the Building Societies is likely to resemble that of the banks : a few large dominating financial institutions competing only within the limits of an agreement—quite unlike the people's co-operative organizations they still claim to be."

*

Another point is that on the whole their service to the community has been expensive, and without any control other than that exercised by a financial house guarding its securities.

*

What hope is there of such an organization as a Building Society tackling the problem of the very cheapest types of house ? One would like to know the history of that sudden rush of generosity on the part of a few big Societies, when they offered to co-operate with the Government in financing cheap house construction ; and how in the cooler moments of reflection the offer was withdrawn.

INFORMATION

In a world of gradually complicating efficiency the architect has been content to potter along pretending to be an artist. The idea that his own office should be as efficient as that of the organizations he serves has been, if not a repugnant, then at any rate, a remote contingency.

*

There isn't, or there hasn't been, a single really good book which covers office management in relation to contemporary needs ; and until a selection from the series of Information Sheets prepared for the use of Sir John Burnet, Tait and Lorne's office appeared in this JOURNAL. I don't think we realized how much information had to be used in daily practice and how much time was wasted in the normal hole-and-corner methods of finding out.

*

This series, amplified to the number of 147 separate sheets and prefaced by a concise statement of that firm's office organization is now issued by the Architectural Press.

*

The cover is made of non-inflammable celluloid, called Rhodoid, which is so shiny that one could see to shave in it ; and it is bound with curly wire, which is sensible because it lets the book lie open on the desk. The shiny black cover will keep clean indefinitely.

*

I confess that I am moved as much by the book's beauty as by its immense practical value.

SLUM

From the supper-discussion of the Architecture Club on Monday night, I took away three precepts. They are worth remembering. Complete slum clearance can be carried out only on condition :—

1. That the problem be regarded as what it really is, the remodelling of 19th century urbanism.
2. That there be continuity of political policy (" there have been eight Ministers of Health in seven years ").
3. That some centralized authority be formed to deal with the organization of the offensive.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, December 7

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE. At 29 *Lincoln's Inn Fields, W.C.2.* " The Rent, etc., Act, 1933, from the point of view of the Profession." By Montagu Evans, M.C. 7 *p.m.*

EXHIBITION OF MODERN LIVING. At *Whiteley's, Queen's Road, W.2.*

INDUSTRIAL CO-PARTNERSHIP ASSOCIATION. At the *Holborn Restaurant, Kingsway, W.C.1.* Monthly luncheon. " The Influence of Recent Events on the World of Industry." By Harold Butler, C.B. 12.50 *for* 1 *p.m.*

INSTITUTION OF STRUCTURAL ENGINEERS. At 10 *Upper Belgrave Street, S.W.1.* " The Application of High Grade Steel in Reinforced Concrete." By Dr. Fritz Emperger. 6.30 *p.m.* (Yorkshire Branch) At the *Hotel Metropole, Leeds.* " Properties of Concrete : A Summary of Present-day Information." By J. Singleton-Green. 7 *p.m.*

Friday, December 8

FACULTY OF ARCHITECTS AND SURVEYORS. Annual dinner. At the *Hotel Metropole, W.C.2.* 7.15 *pm.*

TOWN PLANNING INSTITUTE. At *Caxton Hall, Caxton Street, S.W.1.* " The Town Planning Movement." By the Rev. Dugald MacFadyen, M.A. 6 *p.m.*

Saturday, December 9

Sunrise 7.53 a.m. Sunset 3.52 p.m.

ARCHITECTURAL ASSOCIATION. 34-36 *Bedford Square, W.C.* " The Housing of the Future." By the Hon. H. A. Pakington, F.R.I.B.A. 3 *p.m.* Exhibition of photographs taken on the A.A. Excursion to Italy, 1933. Closing day. 3 *p.m.*

Tuesday. December 12

ILLUMINATING ENGINEERING SOCIETY. At 2 *Savoy Hill, W.C.2.* " An Analytical Basis for a Lighting Code." By A. W. Benttell, M.I.E.E. 7 *p.m.*

INSTITUTION OF WELDING ENGINEERS. At the *Institution of Mechanical Engineers, Storey's Gate, S.W.1.* " Pressure Booster Installations for Acetylene Distribution for Welding." By C. S. Milne. 7.45 *p.m.*

Wednesday, December 13

MANCHESTER SOCIETY OF ARCHITECTS. At the *Society's Rooms.* " Housing with Special Reference to Slum Clearance." By L. H. Keay, F.R.I.B.A. Exhibition of work of Liverpool Housing Department. 6.30 *p.m.*

NEWS

POINTS FROM THIS ISSUE

A rough-cast railway carriage 727

Assistant architects and registration .. 727

" The greatest æsthetic philosopher of modern times....is Ruskin " 732

Life is not long enough to train a man as both architect and engineer 734

In London, the L.C.C., as the bye-law-making authority, have in course of preparation bye-laws approving the introduction of the one-pipe system of drainage 734

TROLLEY-BUSES IN BEDFORD SQUARE

The proposal of the London Passenger Transport Board to bring trolley-buses through Bedford Square, W.C., was discussed by occupants of premises in the Square at a meeting held at the Architectural Association on Monday night. Mr. F. R. Yerbury presided.

The following resolution was passed unanimously : " This meeting of tenants in Bedford Square records its profound astonishment and concern at the proposal of the London Passenger Transport Board to run trolley vehicles through the square. The proposal, if proceeded with, would inevitably destroy the general character and amenities of the square as they at present exist and increase to a most dangerous extent the traffic in an already congested area about Tottenham Court Road. It records, further, its determination to resist the proposal by all possible means."

It was also decided to form a Bedford Square Tenants' Association for the purpose of resisting the proposed scheme.

CHURCH ACOUSTICS

It is announced that the ecclesiastical authorities in the diocese of Chichester have appointed Mr. Hope Bagenal as acoustical adviser for all new churches built under the Sussex Church Builders scheme.

The Bishop of Chichester, writing in the *Diocesan Gazette* says : " It used to be supposed that nobody could tell until the day when a church or other building was completed whether or not its acoustics would be good. And the easy-going idea that the whole thing was pure chance has often prevented any real trouble being taken in this department of the architecture by the people most concerned ; that is to say, the congregation or the audience, as the case may be. It cannot be stated too clearly that the ' pure chance ' notion of acoustics is a complete delusion. There is a science of acoustics, and if the rules are obeyed by the architect in planning the building good hearing can be guaranteed. Of course, the rules have to be known in order to be obeyed ; and it is the work of a specialist to know them and secure that the knowledge is used and applied. That is why a definite order has been given in this diocese that the plans of all new churches built under the Sussex Church Builders scheme must be submitted to the best English authority on acoustics, Mr. Hope Bagenal, F.R.I.B.A., who has to certify to the Bishop that he is satisfied with the plans from the acoustic point of view.

" The first results of this calling in of Mr. Bagenal as expert in acoustics are seen in the new Church of St. Wilfrid, Brighton. It is a church with a somewhat lofty nave and a high tower immediately over the sanctuary—with peculiar difficulties in the way of hearing on the part of the congregation. Thanks to the close collaboration in this special department between Mr. Goodhart-Rendel, the architect, and Mr. Bagenal, the specialist, the acoustics of the whole church are perfect."

A YEAR'S WORK

It is now a year since the Special Committee for Public Relations of the Building Industries National Council actively engaged in the task of educating public opinion as to the merits of expenditure through the Building Industry. The results of false and mistaken economy are still with us in many directions, but on the whole there is a substantial improvement in the position of the building and allied industries. According to " The Statist " of December 2, the reduction in unemployment in building during the year the Committee has been in operation (October 1932-1933), was 80,055. The effect of the increased expenditure through the building industry on the allied industries is shown by reductions totalling 27,875 in those industries.

This total reduction of 107,930 in the number of unemployed means a reduction of expenditure on unemployment benefit at the rate of £107,930 per week, or £5,600,000 a year. The beneficial effect of the reduction in unemployment on the general trade of the country may be readily appreciated by the fact that the ability of these workers to purchase has increased by £215,860 a week, or £11,200,000 a year. This work of public education, conducted on behalf of the building and allied industries, must be sustained. Subscriptions, which are invited from the building and allied trades, should be made payable to " The Special Committee for Public Relations," and should be addressed to the Honorary Treasurer, at 5 Duke Street, Adelphi, W.C.2.

BOROUGH POLYTECHNIC

An exhibition of Students' work is to be held at the Borough Polytechnic, Borough Road, S.E.1, on Friday, December 8 (6 to 9 p.m.) and on Saturday, December 9 (2 to 9.30 p.m.).

FUTURE OF THE BRITISH INSTITUTE OF INDUSTRIAL ART

The Council of the British Institute of Industrial Art announce that in view of the decision of the Board of Trade to take direct responsibility for matters relating to Art and Industry, with the assistance of a Council representative of artists, industrialists and distributors, and presided over by Mr. Frank Pick, they have decided to take steps to liquidate the present Corporation and to merge its activities in those of the new organisation.

The Permanent Collection of examples of British Industrial Art, which for several years has been maintained by the Institute in the North Court Annexe of the Victoria and Albert Museum, has been presented by the Institute to the Museum authorities, who have accepted responsibility for maintaining and displaying the collection at Bethnal Green or South Kensington.

The Isidore Spielmann Memorial Fund for the purchase of new examples for the collection will be vested in the Director of the Museum, to be used for its present purpose.

D.I.A. ANNUAL DINNER

The annual dinner of the Design and Industries Association was held at the Café Royal, London, on December 1. Mr. Frank Pick presided.

Mr. Pick referred to the representative council appointed by the Government to deal with questions affecting the relations between art and industry (see note above). He said it was the crowning triumph of those who had worked for the co-operation of art and industry that the Board of Trade was to embrace art in its sphere of activity.

Among those present were: Dr. and Mrs. Leslie Burgin, Mr. and Mrs. John de la Valette, Dr. and Mrs. Erich Mendelsohn, Mr. and Mrs. Gerald Barry, Mr. James Laver, Mr. Christopher Hussey, Professor and Mrs. E. M. O'R. Dickey, Mr. and Mrs. P. H. Jowett, Mr. C. Eaton, Mr. and Mrs. Henry G. Strauss, Mr. and Mrs. Edward Maufe, Mr. Joseph Emberton, Mr. and Mrs. Serge Chermayeff, Mr. J. R. I. Brookes, Mr. A. B. B. Valentine, Mr. Clough Williams-Ellis, Mr. F. R. Yerbury, Paymaster-Commander V. H. Goldsmith, Mr. R. Jardine Brown, Mr. and Mrs. John Gloag, Mrs. G. Lovat Fraser, Mr. and Mrs.

Darcy Braddell, Mr. A. P. Ryan, Mr. and Mrs. Lynton Lamb, Mr. and Mrs. Fred Phillips, Major and Mrs. Longden, Mr. and Mrs. W. J. Basset-Lowke, and Mr. and Mrs. C. H. Holden.

THE ARCHITECTURE CLUB

"Are we Tinkering with the Slum Problem?" was the subject of the Architecture Club supper-discussion, held at the Architectural Association on Monday.

Mr. Frederic Towndrow, A.R.I.B.A., who opened the discussion, said the Government had pledged itself to clear the slums in five years. With its present method of going to work he doubted if it would clear them in 500 years.

The policy of the present Government was wrong in throwing the general housing question back into the hands of private enterprise. Private enterprise was quite incapable of producing houses to let from 8s. to 13s. a week inclusive. And that was precisely the house which was needed. In fact, to throw the matter back to private enterprise was to throw the matter back to the very agencies which had created the slums. There were many districts in London, for instance, where the speculative builder had only recently left, and even now they were partly slums.

It seemed to him that the only logical solution of the slum problem would be land nationalization. Meanwhile, he thought that it was most important in the preparation for that happy event that architects, town planners, surveyors and engineers should make a concerted report to the Government as to how the housing and rehousing of our population should be arranged for the next 30 years. Whether to be in satellite towns, suburbs or tall "needles" in the centre with lifts and central heating. What we wanted was a scheme to include all those, and a scheme of agreement between the experts.

GOVERNMENT OFFICES IN EDINBURGH

In Parliament on Friday of last week Commander Cochrane asked H.M. Commissioner of Works whether arrangements had been concluded for the employment of an architect to prepare plans and designs for the proposed Government offices in Edinburgh, and whether those arrangements involved any substantial financial liability in advance of the Government reaching a decision whether to proceed with the erection of the building?

Mr. Ormsby-Gore replied that it was hoped that the appointment of an architect would be made shortly. The draft agreement provided for a first payment to the architect of £2,000 on approval of the sketch plans. A decision would then have to be taken whether to proceed with the erection of the building or not. Should the decision be not to proceed with the scheme, a further sum estimated not to exceed £1,000, would be payable to the architect. The necessary financial provision would be made on the Estimates for Public Buildings, Great Britain, and Labour and Health Buildings, Great Britain, for the forthcoming financial year.

Mr. Nall-Cain inquired if arrangements had been concluded for the employment of an architect to prepare plans and designs for the proposed Government offices in Whitehall; and whether those arrangements involved any substantial financial liability in advance of the Government reaching a decision whether to proceed with the erection of the building?

Mr. Ormsby-Gore replied that it was hoped the appointment of an architect would be made shortly. The draft agreement provided for a first payment to the architect of £10,000 on approval of the sketch plans. A decision would then have to be taken whether to proceed with the erection of the building or not. Should the decision be not to proceed with the scheme, a further sum estimated not to exceed £5,000, would be payable to the architect. The necessary financial provision would be made on the Estimate for Public Buildings, Great Britain, for the forthcoming financial year.

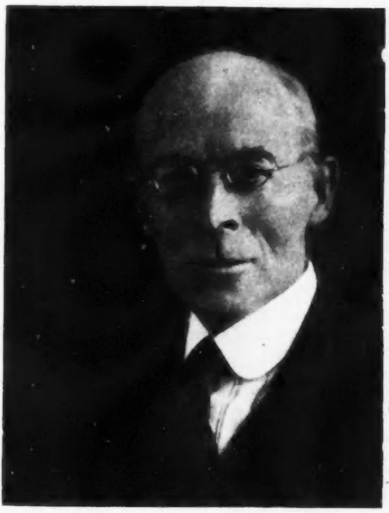
Further parliamentary news appears on page 740.

AMERICAN BUILDING PLAN

A vast building programme, which, it is suggested, might be subsidized by the American Government at a cost of approximately £3,000,000,000, over two years, has been suggested by N.I.R.A. experts as a constructive means towards recovery (states the Washington correspondent of *The Daily Telegraph*).

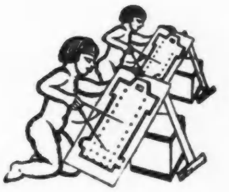
The scheme has been produced by the N.I.R.A. Division of Economic Research and Planning.

It is emphasized that the plan is "only a suggestion." Among the details of the plan are proposals for spending £900,000,000 on housing, £800,000,000 on roads, £350,000,000 on "industrial improvement," £300,000,000 on railway improvements.



Charles Marriott, extracts from whose lecture on "Contemporary London Buildings," delivered at the R.I.B.A. on Monday last, are printed on pages 732–734.

COMPETITION NEWS



GIDEA PARK COMPETITION RESULT

Following is a list of the successful competitors in the competition for five different types of houses (ranging from £400 to £900), organized by Gidea Park, Ltd., in connection with their Modern Homes Exhibition :—

CLASS A (£400 semi-detached: £800 pair).—G. F. Ransom, 96 Bedford Street, Liverpool; W. G. Holford and G. Stephenson, AA.R.I.B.A. 80 Bedford Street, Liverpool; Scott, Chesterton and Shepherd, F. and AA.R.I.B.A., 12 York Buildings, Adelphi, W.C.2; Euston Salaman, 27 Dartmoor Street, W.8; and J. R. Moore-Simpson, A.R.I.B.A., 34 Bedford Row, W.C.1.

CLASS B (£500 semi-detached: £1,000 pair.)—Messrs. Andrews and Duke, LL.R.I.B.A., 14, Hanover Square, W.1; I. Schultz, A.R.I.B.A., 43 Clifton Gardens, W.9; A. Maxwell Allen, A.R.I.B.A., Claridges, Lingfield Surrey; Scott, Chesterton and Shepherd, F. and AA.R.I.B.A., 12 York Buildings, Adelphi, W.C.2; and J. R. Moore-Simpson.

CLASS C (£650 detached, with garage).—Messrs. G. F. Ransom, 96 Bedford Street, Liverpool; Minoprio and Spencely, B.ARCH. AND AA.R.I.B.A., 18 Seymour Street. W.1; E. J. Wood and G. A. Smith, 28 Woodland Rise, Greenford, Middlesex; L. W. Thornton-White, A.R.I.B.A., 26 Regent's Park Road, N.W.1; and J. R. Moore-Simpson.

CLASS D (£800 detached, with garage).—Messrs. H. S. and F. R. Pite, 123 Main Road, Sidcup, Kent (two designs in this Class); L. W. Thornton-White, A.R.I.B.A., 26 Regent's Park Road, N.W.1; H. Spence-Sales, c/o High Commissioner for New Zealand, 415 Strand, W.C.2; and Scott, Chesterton and Shepherd.

CLASS E (£900 detached, with garage).—Messrs. G. F. Ransom, 96 Bedford Street, Liverpool; Frank Nicholls, L.R.I.B.A., 45 Bedford Row, W.C.1; Tecton, 57 Haymarket, S.W.1; Scott, Chesterton and Shepherd, F. and AA.R.I.B.A., 12 York Buildings, Adelphi, W.C.2; and John Leech, L.R.I.B.A., Bentfield End, Stansted, Essex.

All the above competitors, having complied with the conditions of the competition, have received a premium of £10, and have been appointed by the exhibition organizers as their architects in connection with the execution of their designs.

At the present time it is not intended to make the designs public.

The thirty-five houses will be erected by June 25, 1934, and will later form the subject of another competition, when the architect of the house the assessors consider the best in each class will receive a further premium of £20.

The organizers of the Exhibition state: "Realizing that the exhibition of these houses would be incomplete without the inclusion of the thousand-and-one accessories of up-to-date housing, we are laying out several acres of ground to form a comprehensive exhibition area. Stands will be erected and every facility afforded to those associated with housing accessories to make an effective display of their products. In addition, the gardens will be laid out and will, themselves, form a section of this Modern Homes Exhibition. The opening date is July 31, 1934, and the Exhibition will continue open to the public until August 20."

The successful designs may be inspected at the Company's office, Hare Street, Gidea Park, Essex, by any competitor any day before January 1, 1934.

The Assessors in the Competition were:—Professor S. D. Adshead, F.R.I.B.A., Alderman Ewart G. Culpin, J.P., F.R.I.B.A., and Messrs. A. E. Beresford, F.R.I.B.A., E. Maxwell Fry, A.R.I.B.A., Howard Robertson, F.R.I.B.A., and W. Harding Thompson, F.R.I.B.A.

The assessors, in their report, said:

"GENERAL.—Largely on account of the freedom allowed by the conditions in the matter of construction and design, the competition produced a total of 475 sets of drawings rising to unusual levels of skill, and advancing contemporary standards of house design to a degree which will only be properly appreciated when the selected houses are finally built. Many competitors attacked the problem with fine enthusiasm, entering schemes in various classes; some, indeed, for all types of houses.

It may not be without significance that the largest number of the designs submitted was for the cheaper form of house, while the entries for the intermediate classes C and D were not as numerous as for the other types.

"PRESENTATION.—This varied between the extremes of draughtsmanship and was at its best in those designs where new forms of construction and planning had to be the more clearly demonstrated on account of their novelty.

"THE DESIGNS.—On the whole, the draughtsmanship was direct and informative. The competition marks a departure from hitherto accepted traditions of design. A big majority of drawings, for good, and in some cases for less good reasons, 'went modern.' A smaller number of these substantiated their claim to set up new contemporary standards. It is a matter for congratulation that this number should be as considerable as it is, and its standards of design so high.

"CLASSIFICATION OF DESIGN.—Reviewed in general, schemes fall into four divisions:

"(1) Designs of traditional character, with pitched tile roofs and smallish Georgian or cottage-type windows.

"(2) The 'mock-moderns': schemes that exhibit the tricks but not the logic of good contemporary design. Most but not all of this class have been eliminated from the final round.

"(3) A relatively large group of designs employing traditional materials and construction in the form of flat roofs of timber and asphalte, large window openings and freer and more open planning. This group represents an intelligent compromise between old and new methods, and shows a very distinct contribution towards the problem of small house design.

"(4) Two designs, one in the cheapest, and one in the most expensive type, offering a complete departure from traditions both in plan, construction, and consequently in general design. The 'plastic' qualities of reinforced concrete have enabled the designers to plan on a basis of the exact functioning of the domestic machine. The completed houses will prove both an acid test of the designers' plan and a means of judging the public's reaction to adventurous building.

"The competition was expressly for *modern* homes, and preference was given as far as possible to designs avoiding the hackneyed and stereotyped designs so universal in small house building."

COMPETITION FOR CONCRETE HOUSES, BELGIUM

Following is the result of the national architectural competition for a single dwelling house, intended to demonstrate the use of artificial Portland cement, organized by the Trade Association of Belgian Manufacturers of artificial Portland cement:—

1st: Messrs. de Koninck and Franssen architects S.C.A.B.

2nd: Mr. Charles Van Nuten, architect S.C.A.B.

3rd: Mr. Van Antwerpen.

The winning design is illustrated on pages 723-726.

Competitions Open

December 2.—Mr. J. P. Turner, J.P., of Cardiff, invites architects and town planners to submit designs for the lay-out of a building estate of about seven acres at Penylan Hill, Cardiff. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £100, £50 and £25. Conditions, etc., obtainable from E. Turner and Sons, Ltd. Penarth Road, Cardiff. Deposit £1 1s.

December 15.—Sending-in Day. Messrs. Jenson and Nicholson invite designs for the decoration of a café-restaurant. Assessors: G. Grey Wornum, F.R.I.B.A.; Louis de Soissons, F.R.I.B.A.; and G. Alan Fortescue, F.R.I.B.A. Premiums: 50 guineas, 15 guineas and 10 guineas. Intending competitors should forward names to the firm at 15 Berners Street, Oxford Street, W.1.

December 29.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor: Thomas S. Tait, F.R.I.B.A. Premiums: £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1. The conditions were reviewed in our issue for September 28.

January 13, 1934.—Sending-in Day. Proposed Public Elementary School, to be erected on a site in Han Lane, Coventry, for the City of Coventry Local Education Committee. Open to architects whose offices are situate within the City of Coventry on November 1, 1933. Assessor: C. E. Bunch, F.R.I.B.A. Premiums: £100, £50 and £30. Last day for questions was November 18. Designs are to be submitted to Frank H. Harrod, Director of Education, The Council House, Coventry, by January 13.

January 15, 1934.—Designs of electrical kitchens suitable for (1) a house (or flat) valued at £300-£400 (net building cost without land), and (2) a house (or flat) valued at £800-£900 (net building cost without land), for the British Electrical Development Association. Assessors: R. S. Downe, M.I.E.E., Francis Lorne, F.R.I.B.A., Lionel G. Pearson, F.R.I.B.A., A. C. Cramb, M.I.E.E., M.I.M.E., and Miss Maughan, M.SC. Premiums: £50 and £25, for each section. Designs are to be sent to the Association at 2 Savoy Hill, W.C.2, not later than January 15, 1934. Conditions, etc. (Price 1s.), are now obtainable.

No date.—The Stoke-on-Trent City Council invites competitive designs for a proposed Mental Colony to accommodate 500 patients. The assessor is to be appointed by the President of the R.I.B.A. Premium £300. Copies of the proposed scheme and conditions of the competition are obtainable from E. B. Sharpley, Town Clerk, Town Hall, Stoke-on-Trent.

[For Competitions Pending, see last week's issue.]

R. I. B. A.

LONDON ARCHITECTURE MEDAL

At the general meeting of the Institute, held on Monday last, Sir Giles Gilbert Scott, R.A., presented the R.I.B.A. Medal and Diploma for a London Building completed between 1930 and 1932 to Messrs. Sir John Burnet and Partners and Messrs. Campbell Jones, Sons and Smithers, the architects for Lloyds Bank Headquarters, Lombard Street elevation.

The presentation was preceded by a paper on "Contemporary London Buildings" by Mr. Charles Marriott, HON. A.R.I.B.A. Extracts from the paper are given on pages 732-734.

The vote of thanks to Mr. Marriott was moved by Professor A. B. Knapp-Fisher, F.R.I.B.A., and seconded by Mr. Howard Robertson, F.R.I.B.A.

CHRISTMAS HOLIDAY LECTURES FOR CHILDREN

The seventh series of Christmas Holiday Lectures on Architecture will be given at the Institute by Mr. E. R. Jarrett, A.R.I.B.A., on Monday, January 1, Wednesday, January 3, and Friday, January 5, 1934. The talks, which will be illustrated by lantern slides, will be held at 3.30 p.m. on each day.

Mr. Jarrett has selected as his subject, "Some London Buildings." They will be dealt with as follows: (1) Mediæval, (2) Renaissance, (3) Modern.

The Council of the Institute have agreed to offer four prizes in the form of books for essays on the series of lectures. There will be one prize each for boys and girls under and over fourteen years of age respectively.

Obituary

F. W. WALLER

We regret to record the death of Mr. Frederick William Waller, formerly resident architect of Gloucester Cathedral.

Mr. Waller, who was eighty-seven years of age, followed in that office his father, the late Mr. F. S. Waller, who was appointed architect to Gloucester Cathedral in 1852.

The position is still held by a member of the family, for Mr. Waller's son, Col. Noel H. Waller, holds the office, having succeeded his father some five years ago.

A. H. ROE

We regret to record the death, in his sixty-second year, of Mr. Arthur Henry Roe, A.R.I.B.A., of Ilford. Mr. Roe was deputy architect of the West Ham Corporation.

BELGIAN COMPETITION FOR A CONCRETE HOUSE

The competition was organized by the group of manufacturers of Belgian cement. The assessors say the results of the competition indicate that a great step forward can be made rapidly in the standardization of concrete dwelling houses, provided attention is paid by architects and manufacturers to the perfecting of proposed methods of construction, shuttering, and so on.

According to estimates accompanying the plans, the cost of building houses of the size laid down in the conditions is £600 to £700 at par, which shows a saving of 20 per cent. on normal building methods.

The results of the competition are given on the facing page, and the winning design, which has just arrived in this country, is illustrated on this and the following pages.

TRANSLATION OF AUTHOR'S REPORT

THE author has sought a solution in a plan composed from a series of similar units.

The site was not defined in the conditions, and it seemed logical to consider the plan systematically, commencing from the sunny aspect most favourable for the rooms. This led to the arrangement of all the bedroom windows on the side of the rising sun, the kitchen and scullery on the north side, and a rational orientation of the living rooms.

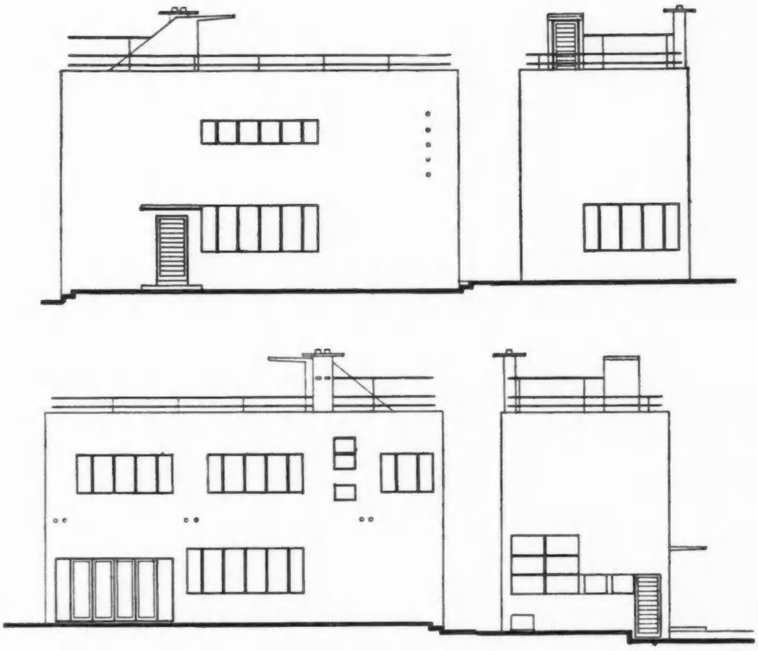
From this initial conception there results a rectangular plan, which may be applied, for instance, on a site measuring twenty metres along a north-south road and twelve and a half metres on an east-west road; the depth of the site being variable.

A site of ·075 acres, approximately, would in this case be quite suitable, while allowing a distance of 5 metres between the three fronts and the centre lines of the fencing. The elasticity of the system of the proposed plan would allow for variations in arrangement of the main units, comprised between four columns, the whole taking the shape of an L. This conception, while being still a good one, does not lend itself to perfect orientation.

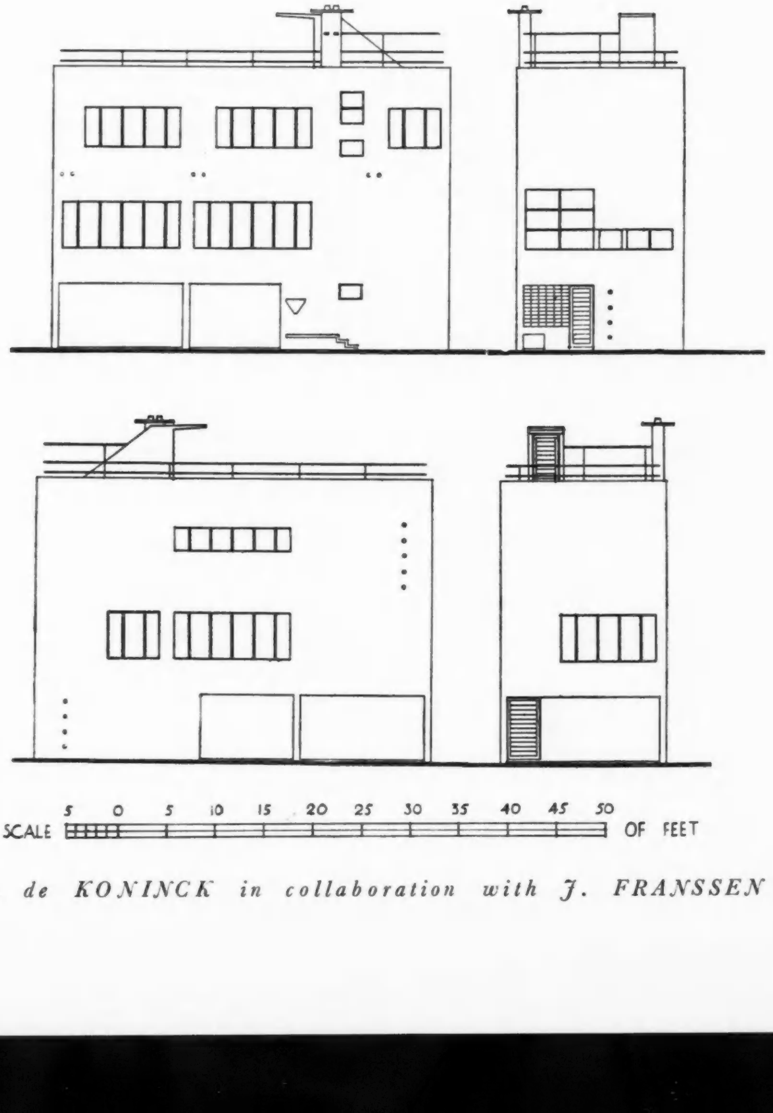
A principle of some importance is the expansibility of the plan. It would be easy to build a house, answering the specification, either with two bedrooms or with five or six bedrooms, the living space being capable of adaptation to the requirements. It is to be noted that the kitchen is amply sufficient for the household requirements (in area) of a family consisting of as many as ten. In the latter case the four-burner cooker would be replaced by a six-burner cooker.

As an alternative, the author gives a raised building, in which the basement is entirely eliminated and replaced by rooms situated on a level with the entrance.

The calculation of the comparative cost

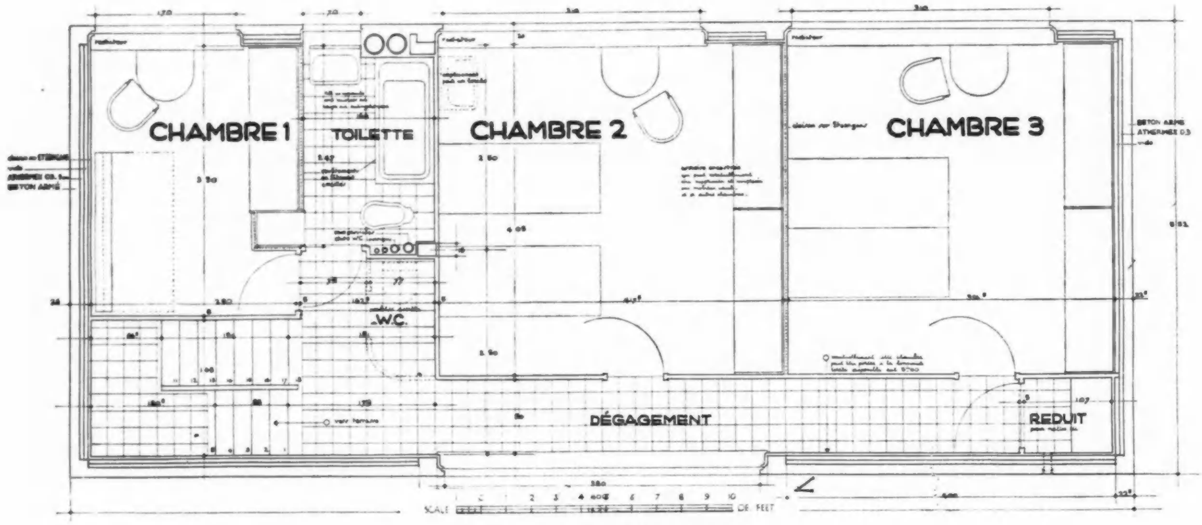


Above: Type A, with basement, see section on page 726. Below: Type B, with basement eliminated and replaced by rooms at ground level.

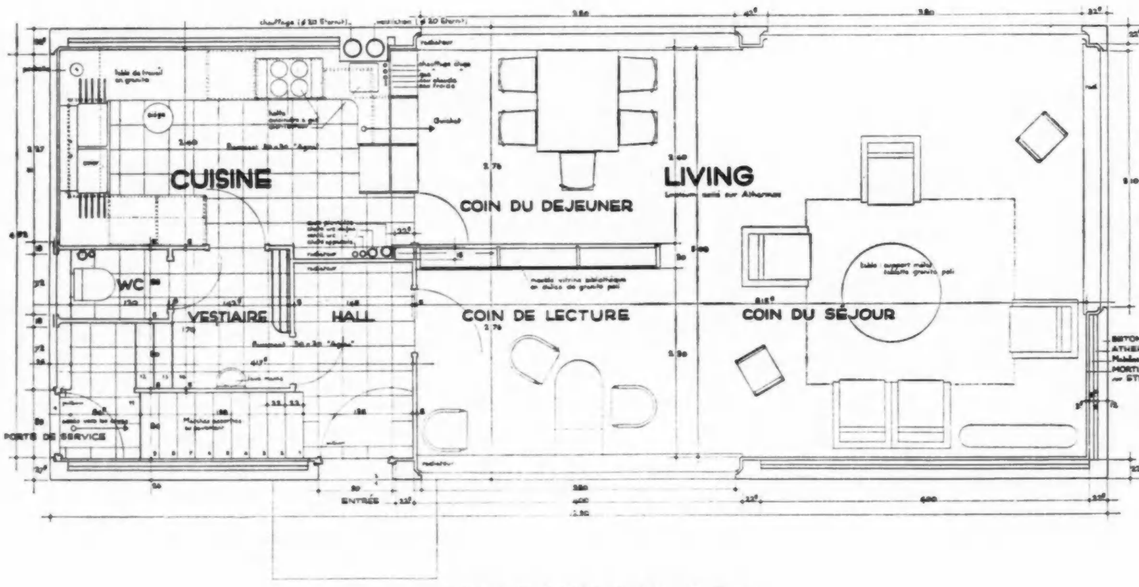


WINNING DESIGN: BY L. H. de KONINCK in collaboration with J. FRANSSEN

COMPETITION FOR A CONCRETE HOUSE:


CHAMBRE 1
TOILETTE
CHAMBRE 2
CHAMBRE 3
W.C.
DÉGAGEMENT
REDUIT
BETON ARMÉ
ATHERMEX O.3
SCALE
OF FEET

FIRST FLOOR PLAN. (A Type)


CUISINE
LIVING
COIN DU DEJEUNER
WC
VESTIAIRE
HALL
COIN DE LECTURE
COIN DU SÉJOUR
PORTE DE SERVICE
ENTRÉE
BETON 12 cm
ATHERMEX O.3 . 5 cm
MORTIER de LAITIER BLANC
sur STEENGAAS

GROUND FLOOR PLAN. (A Type)

between the basement and the raised construction, appear to be to the advantage of the latter. A further advantage is that the building gains in appearance and its selling value is enhanced.

SYSTEM OF CONSTRUCTION

Framing consisting of columns; very deep beams of little thickness, cast *in situ* in shuttering; filling composed of pre-cast units placed in position without shuttering.

A.—*OUTER WALLS.*—The deep beams serve also as filling. The wall consists of:

(*a*) A *reinforced concrete skin* 12 c/m thick.

(*b*) An *insulating lining* of "Athermex" cellular concrete, density 0·3, thickness 5 c/m, serving at the same time as internal shuttering.

(*c*) A *still air space* formed by horizontal sectional air cushions, separated by an extension inwards, across the cavity, of the outer concrete shell at cill and lintol level. The width of the cavity depends on the dimensions of the columns, and it is advisable that it should be more than 3 c/m and less than 8 c/m. In this case the air cushion is 5½ c/m wide.

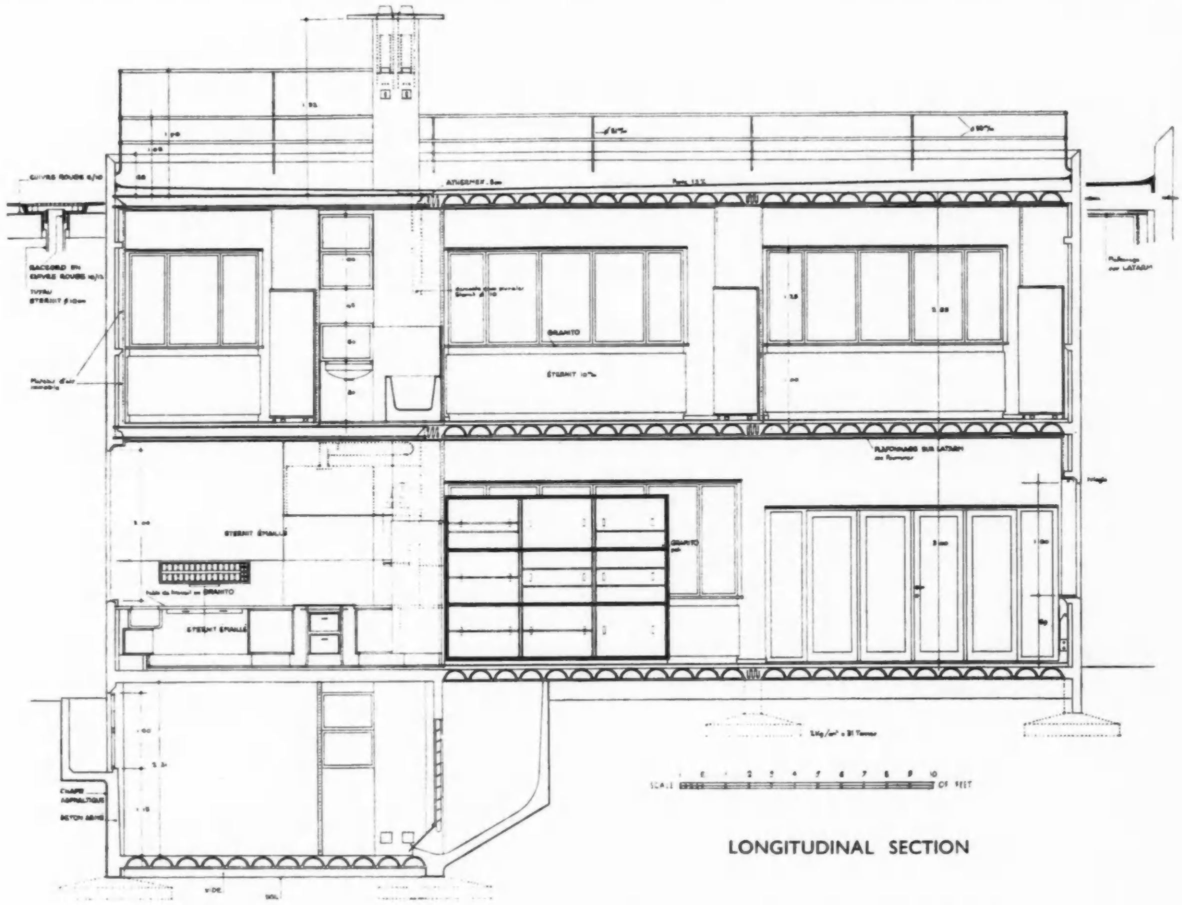
(*d*) An *internal skin*, consisting of a "Steengaas" stoneware grillage, stretched between the floors and ceilings, reinforced vertically and horizontally by a frame of 8 m/m diam. rods, spaced at 50 c/m centres. This metallic net is plastered with a mortar composed of one part cement and three parts white sand, finished with a plaster mortar 2 or 3 m/m thick, according to the usual methods of plaster finish for inside walls.

(*e*) A *facing* covering the external concrete composed of white gravel and white sand. By making use of gravel graded $^{3}/_{15}$ and sand 0/3, the granulometric composition was found to be as follows: 59 per cent. $^{3}/_{15}$ gravel (800 litres), 25 per cent. 0/3 sand (450 litres), 16 per cent. cement (350 kilos). This composition, poured in moulds gives a straight and smooth surface and is bush-hammered four weeks after pouring the concrete.

B.—*FLOOR SLABS.*—The arrangement of filling includes:—

(*a*) A *strong structure* composed of pre-cast units ("B.A.S.C." hollow tubes of reinforced concrete), whose cross-section is a semi-circular wall, the arc of which has, as a chord, a slightly projecting flat heel. The walls are reinforced with a metallic mesh over the entire section and length of the unit, and lengthwise by two round steel bars, placed in the projecting

WINNING DESIGN BY L. H. DE KONINCK



LONGITUDINAL SECTION

A *type with basement. The living-room is subdivided by built-in standard cupboard units, rising to within 2 ft. 6 ins. of ceiling level (see ground-floor plan). Floors and roof are constructed from pre-cast semi-circular hollow reinforced concrete beams.*

heels of the base. The diameter of rods varies according to the span of the floor, and the load to be carried. Placed end to end the filling units, resting on the bearing walls, form in themselves a complete box capable of carrying the dead weight of the floor and of the men carrying out the erection. The bearing structure of the floor is completed by spreading over the surface a rich concrete, filling between the ribs formed by the juxtaposition of the units described. With the length provided under this scheme, the units must be strengthened by reinforcement at the centre of the span before being filled. The "B.A.S.C." beams are arranged at centres of one-third of a metre; they weigh about 20 kg. The weight of the finished floor is only 150 kg. per square metre.

(*b*) *Ceiling*.—The underside of the filling can be plastered direct. However, taking into account experience in plastering on any pre-cast cement elements, we provide, for the beauty of the finish, plastering on a net of "Latarm" wood laths fixed on linings 4 c/m by 7 c/m, held in the joints existing between the beam units by means of 5 m/m wires in the form of a V and spaced every 50 c/m.

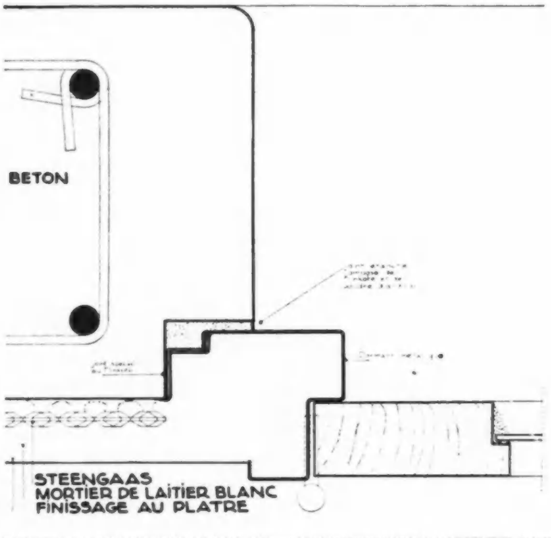
(*c*) *Interior*.—The best floor covering over concrete filling is glued linoleum. A perfectly smooth surface must be provided for the linoleum, and this can be obtained by a screeding over the filling. From the acoustic point of view this alone is not sufficient, and an underlayer must be specially provided; "Athermex" cellular concrete, 4 c/m thick (density 0.7) is suggested. It is understood that the screeding, with 1 part cement and 3 parts river sand, must be done on the underlayer of "Athermex." The linoleum will be glued down in the usual way, with "Kid" copal glue. Paving slabs are laid in the usual manner, with cement mortar on a bed of sand.

(*d*) *Exterior*.—Terrace for constant use. For the purpose of heat insulation, while providing the usual falls for conveying rain water to the drains, cellular concrete with a hard finish is recommended (as explained in the case of the foundation for lino). In this case the finishing mortar on "Athemex" will be waterproofed by the addition of "Lithosite." The waterproofing layer is on the Belgian Shell Company principle and consists in the application of "Flincote" asphalt emulsions. The use of asphalt emulsions make possible an application of asphalt adhering perfectly to the actual concrete mass, even—as is usually the case—when a certain amount of building or rain water is still contained in the surfaces to be protected. The application proceeds as follows:—

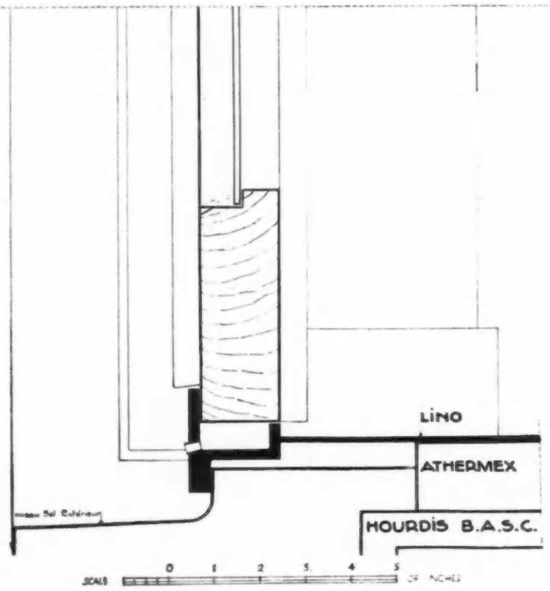
1. Impregnation of the surface with diluted F.13 H.P.C. (the asphalt emulsion).
2. Application of a layer of F.13 H.P.C. and laying the strengthening fabric.
3. Further application of F.13 H.P.C.
4. Traffic surface composed of 1 part F.13 H.P.C. and 4 parts river sand.

C.—***STAIRS***.—Stairs are constructed from a slab of reinforced concrete, forming bearing slab. The steps are executed in concrete, to the required section, the concrete consisting of 0·3 white gravel, or mixed crushed stone, or again granulated stone matching that of the pavement, smoothed and finished by the methods used

COMPETITION FOR A CONCRETE HOUSE


BETON
STEENGAAS
MORTIER DE LAITIER BLANC
FINISSAGE AU PLATRE

1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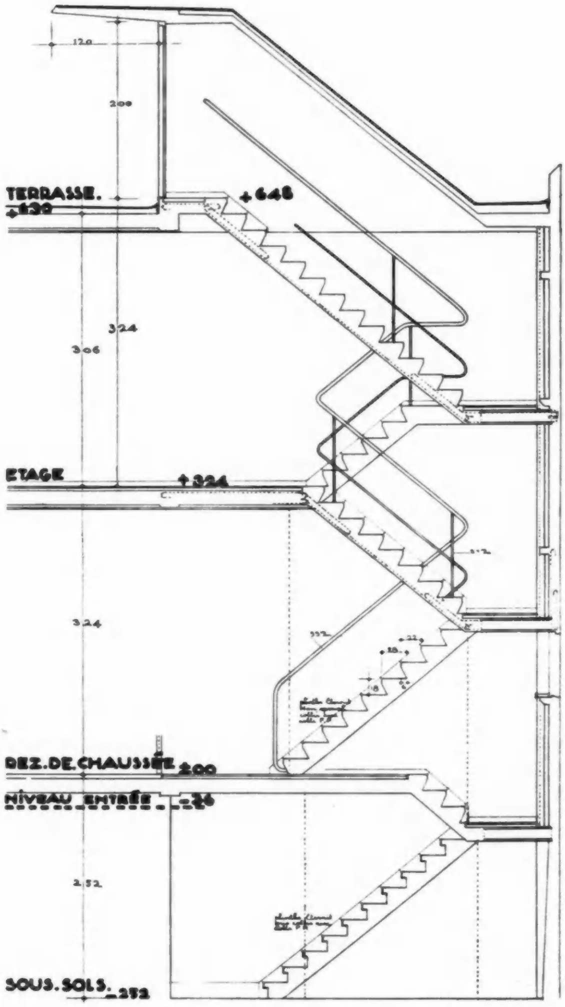
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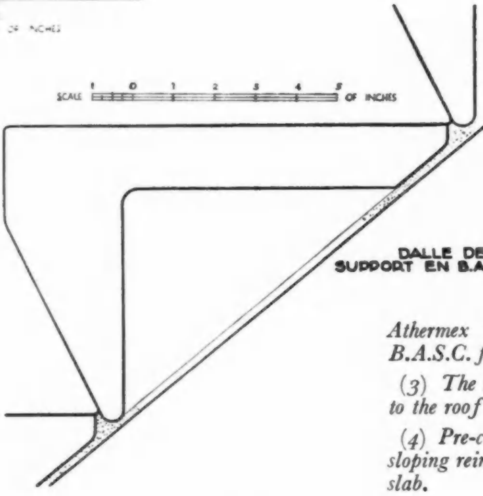

SCALE 1 0 1 2 3 4 5 OF INCHES
DALLE DE SUPPORT EN B.A

for terrazzo. Use might be made of a method shown in detail on this page, by laying pre-cast units on the bearing slab. The stairs to basement are carried out more roughly in ordinary concrete, smoothed down with carborundum, the nosing being formed with an angle iron.

D.—*INTERNAL WALLS.*—The internal partitions are similar to the inside linings of the outer walls, plastered on both faces of the "Steengaas." The kitchen and bathroom are lined with asbestos-cement. Before assembling the parts to be covered, wood laths will be inserted and held in the filling by means of wires bent in the form of a V.

[*Continued on next page*]

(*1*) *Plan through structural reinforced concrete wall showing entrance door, hung in pressed steel frame.*

(*2*) *Section through foot of entrance door, showing linoleum floor covering, Athermex insulation and concrete over B.A.S.C. floor slabs.*

(*3*) *The reinforced concrete stair rising to the roof terrace.*

(*4*) *Pre-cast concrete steps resting on sloping reinforced concrete structural floor slab.*

WINNING DESIGN BY L. H. DE KONINCK AND J. FRANSSEN

The asbestos sheets will be glued to the wood laths by means of F.P. glue.

E.—*DOORS.*—The internal doors have two flush faces; they are hung in pressed metal frames, secured by metal floor strips to the floor filling, their other sides being attached to the framing and the partition grillage. Oblique rods, placed at 45°, will be arranged for the purpose of reinforcement above the top angles of the door frames.

F.—*OUTER DOORS.*—(*a*) The frames recommended are made by the "Soméba" works and are of the "profil luxe série" standard type, consisting of a series of units put together according to the requirements of the plan. These frames are to be galvanized. A galvanized bent metal cill, 2 mm. thick, covers the ledge formed by the reinforced concrete outer wall shell at the height required for supporting the frame. Although it may appear that this detail is an essential one, experience has shown that with rich concrete, a water drip is not necessary, provided the outer surface is subsequently treated according to the external finishing method recommended.

(*b*) The outer doors are to be made of wood, for reasons of economy. The frames will be of pressed metal, similar to the frames of the inside doors.

(*c*) Tightness of the joints of frames and doors will be obtained by means of a special adhesive and elastic mortar, composed of F.13 H.P.C. "Flincote" combined with powdered slate. Further safety is obtained by an internal application of "Flincote," applied in two layers, with a strengthening fabric between them, held between the frames and doors and the concrete uprights.

G.—*OTHER ELEMENTS BASED ON CEMENT.*—In tiled rooms the skirtings will be matched with the floor-tiles selected. For rooms in which the floors are covered with lino, wood skirting boards will be used and stained chemical black. These could be replaced advantageously by special asbestos cement strips, glued to the wall by means of F.P. glue. The price of such strips, however, is very high, as compared with that of wood skirtings.

In the kitchen the author suggests working tables in smooth and hard terrazzo. The window ledges in all rooms will be polished terrazzo. As regards furniture, polished terrazzo slabs can be used for the glazed bookcase, also for the top of the corner table, with chrome-plated metal support.

As regards sanitary appliances, the author points out that, some years ago, there existed, in Belgium, sanitary appliances made entirely of cement and fine granulated aggregate, under a patent process, and which were found to have given very satisfactory results after seven years of use. To our knowledge these appliances are no longer sold here, and we have been compelled to adopt the ordinary appliances.

The pipes above and below ground are to be in asbestos cement of the "Building" type, with special varnish coating inside. The same pipes are recommended also, with ordinary inside finish, for smoke flues and air vents; in this case they will be bedded in reinforced concrete. It will be noted that the plan shows a special arrangement for accelerating the draught at the smoke outlets, and to prevent smoke being blown down on the terrace.

LETTERS *FROM* READERS

C. H. B. QUENNELL, F.R.I.B.A.

C. McARTHUR BUTLER (Registrar, Architects' Registration Council)

R. WYNN OWEN, F.R.I.B.A. (President, Association of Architects, Surveyors and Technical Assistants)

C. M. BOND

FREDERICK GIBBERD, A.I.A.A.

HILDA MASON, A.R.I.B.A.

CAPTAIN ROY FINLAY

C. R. TAYLOR B.Sc., A.M.I. Mech. E.

The Architect as Educator

SIR,—In your very kindly and generous review of the work which my wife and I are doing, you draw attention to the fact that the architect must regard himself as an educator. I am strictly in agreement with you—we must preach the gospel to the heathen, if we wish to save their architectural souls.

I have not been very well lately, and have been sent by my wife to a lovely village in Dorset to recuperate. Here I expected to find peace, but have been disappointed. The older houses are charming and built in the simplest fashion. The walls are in rubble of the local limestone, and one bed of this splits readily and provides the roofing material. The church is Norman—but, alas, there is a bungaloid growth where all the abomination of artificial building materials have been employed.

One of the bungalows rises to classic heights of inappropriateness. The central block is a railway carriage built up on substantial stone piers, and grouped around it are various excrescences with an odd chimney or so run up just anyhow. Obviously the builder was not quite satisfied with the result at first, and thought that something must be done, and then he had a happy idea. He determined to rough-cast the railway carriage. How he did it I cannot say—it is very well done indeed. Even the mullions between doors and windows are covered, and in the circular pediment at the side is a roundel of broken coloured crockery.

It could not have been a cheap job. A railway carriage does not travel on its own wheels, and all this fuss when you have only to dig in the ground to find ready made building materials.

Architects must be prepared to combat this kind of thing. How is it to be done? By writing books? Well, book making is a laborious business. Perhaps lecturing is a simpler way. A lantern must be used and the lectures kept as simple and human as possible. It must be a talk and not read from a manuscript.

There remains yet another way. This summer a house was being built from my designs near a girls' school, whose headmistress is a friend of mine. She has a domestic science class, and I suggested that the girls who are being taught how to keep house should come once a week and find out how one was built. They accepted with alacrity, and I was amazed at the interest the girls took in the proceeding. Damp-courses were held to be thrilling and every detail was investigated. One day I suggested that as we had seen bricks laid, it would be a good idea to see bricks made—so we borrowed cars and went to a brick field.

When you come to think about it, what jollier or more amusing work is there than building a house. So the remedy is in our own hands. We can bring building to life if we are prepared to take the trouble. One other thing we can do, and that is to point out that if you feel that you must use railway carriages, for God's sake don't rough-cast them.

C. H. B. QUENNELL

Registration and Assistant Architects

SIR,—May I, through your columns, invite the attention of those concerned to the fact that applications for admission to the Register from architects who were, or had been, practising in the United Kingdom on January 1, 1932, or who were, on that date, assistant architects with at least ten years' previous experience, must be deposited before December 31, 1933, after which date admission will be restricted to persons who have passed an examination recognized by the Registration Council.

With regard to "Assistant Architects," I am authorized by the chairman to say that the Council have framed an amendment to Regulation 26 (2), to extend the qualifying period of ten years to coincide with the date of the application, if made before December 31, 1933. Applications from assistant architects who would benefit by this amendment in the event of its being authorized, will be considered by the Admission Committee if deposited before December 31, 1933, and on the understanding that such candidates will not be eligible should the proposed amendment not materialize.

C. MCARTHUR BUTLER
(Registrar, Architects' Registration Council)

SIR,—Immediately after the war, the increase in salaried and official employment, emanating from and part of a general economic development, was so evident that a new policy for the profession was a necessity. Existing organizations were not inclined to recognize this great change (except as a matter for disapproval), and in consequence the Association of Architects, Surveyors and Technical Assistants, with membership limited to those in salaried employment, was formed for the purpose of evolving a constructive policy for this field and affording protection as far as possible.

Throughout the progress of the Registration Bill through Parliament the A.A.S.T.A. watched and promoted the interests of salaried men in the profession with the utmost attention; supporting the measure which was ultimately placed (certainly in a much revised form) upon the Statute Book as the Architects' (Registration) Act, 1931.

Under the provision of this Act salaried men, through the medium of the A.A.S.T.A., are represented on the Registration Council by one member in respect to every five hundred of its architect members. The A.A.S.T.A. has also a representative on the Board of Architectural Education. Therefore, the Association is established by law in a position effectively to watch and promote their claims in connection with the Registration Act and any amending Act which may follow.

Apathy leads nowhere, but the law of the land has now given the salaried man a stake in the destinies of the profession which has hitherto been immeasurably beyond his grasp. It is now up to him to see that he uses this privilege to its utmost possibility by ensuring that the interests of the salaried element—the majority of the profession—is represented in due proportion to its numerical strength, by the simple process of reinforcing the membership of the A.A.S.T.A.—the only body which the Act has installed as his mouthpiece in the Architects' Registration Council, which from henceforth must be the controlling body for the affairs of the architectural profession.

It behoves all within the profession to be under no delusion concerning the enormous change which the Registration Act means to the profession. Hitherto its direction has of circumstantial necessity been in the nature of (legally) unauthoritative views promulgated by the Royal Institute of British Architects, but in future that direction will be by the Registration Council possessing legal authority established and supported by Act of Parliament.

From every conceivable standpoint this change should be all to the good as it will liberate the R.I.B.A. from the burden of political and economic consideration and enable it to pursue its way as a learned body dedicated to the promotion of the art of architecture.

In the near future such matters as the code of professional conduct, the scale of remuneration of architects, whether in private practice or salaried employment will, emanating from the Registration Council, be vested with legal authority. The wide and profound significance of this should be grasped and clearly comprehended by every salaried architect on the Register.

The atmosphere is distinctly clearer than hitherto and the salaried man must appreciate that no longer need he languish in an atmosphere of dilletante fog but can, if he be so minded, become unitedly self-reliant through the medium of his own active organization, the Association of Architects, Surveyors and Technical Assistants.

R. WYNN OWEN

The Modern Kitchen

SIR,—The Kitchen Supplement in the JOURNAL for November 9 contains a wealth of useful information deserving of careful study. The kitchen at Brünn by Bohuslav Fuchs is a masterly example of compact and efficient planning.

Some of the other illustrations, however, fall far short of the standard set by the latter. More than 50 per cent. of the plans show the draining board on the wrong side of the sink. A right-handed person holds the article to be washed in the left hand, so that the draining board should be on this side. This is by no means a small point when one considers how often the individual operation is repeated.

The circulation of the kitchen processes round the room is a sound principle, but should not be stressed to the detriment of more important considerations, as it seems to be in the plan B, page 600, where the distance between the store and the cook's table, and between the cooker and the sink necessitates too much running about in so small a kitchen.

Pans should be in close contact with the sink rather than the cooker, as they generally contain water before proceeding to the latter, and return to the sink for cleansing.

C. M. BOND

[*We have submitted the above letter to the author of our article on the modern kitchen, who sends the following reply.*—ED., *A.J.*]

SIR,—I am grateful to your correspondent for the criticisms raised in his letter.

Looking at an isolated kitchen plan, one is rather apt to forget it co-ordinates with the other elements; and its arrangement is, to a certain degree, dictated by the planning of the adjacent rooms, the aspect, and the construction.

Where the draining board is on the right-hand side of the sink, it is because on this side only was there available wall space for hanging the plate rack. It is more important that the plate rack be over the draining board than that the washing-up mop be held in the right or left hand.

The plans selected were to illustrate three types of kitchen: namely, minimum kitchen; kitchen with maid's recess; and kitchen with pantry. They were chosen as typical, not perfect, examples. Except in exhibition kitchens where the plan is isolated, there has not yet been a perfect kitchen; it is doubtful whether there ever will be one.

The object of stacking the pans in a rack over the cooker, after they have been rinsed in the sink, is to give them a thorough drying.

FREDERICK GIBBERD

The A. A. Competition

SIR,—I think your excellent journal is a little hard on the A.A. Competition. It is surely permissible to nibble the problem from both ends.

A panel of architects is operating in my county and nobly endeavouring to improve the designs submitted to various Councils for small houses, etc. Would you condemn this work? The unfortunate architects quite realize that their advice should be called in earlier, but it is something to have even tardy recognition of the value of their services, and personally I feel that every little helps, and that local authorities are beginning to get the idea into their heads that architects should plan buildings and even layouts and not merely be asked to do the trimmings. The A.A. Competition is surely useful to enable the architects themselves to realize what they are up against, and as the first step towards a similar realization by the general public. The vast majority of the latter body, if they have ever heard of an architect at all, imagine that he designs every house that is built.

HILDA MASON

The Town and Country Planning Act

SIR,—Mr. Howard Marshall in a recent broadcast talk made a valiant effort in support of that ill-starred and unpopular Act, the Town and Country Planning Act. He told us that at the present rate of progress, the "planning" of England would take four hundred years. Let us hope that it may take *four thousand* years.

Whilst admitting that there existed no standards of "beauty," he appealed to all the busybodies throughout the land to put their fingers into the unfortunate landowners' pie.

We all want to preserve the beauties of our countryside, but this will never be achieved through the meddling interference of totally unqualified "committees" acting under the powers of an arbitrary Socialist Act, the only effect of which is to discourage and stop natural development and to throw thousands of people out of employment, and still further to depress the estate market.

Let these committees confine their activities to the question of sanitation and hygiene. There is only one way in which the "artistic" aspect will be met, and that is by educating public opinion.

Raise the art of architecture to the place of eminence which it occupied in ancient Greece and establish chairs of architecture in our great universities.

Against the force of enlightened public opinion, there need be no fear of the jerry-builder.

ROY FINLAY

The Grid

SIR,—Now that we are promised a universal supply of electricity in this country at low cost, through the grid, perhaps the British electrical concerns will consider the question of standardizing domestic fittings and appliances with a view to making them interchangeable in all localities.

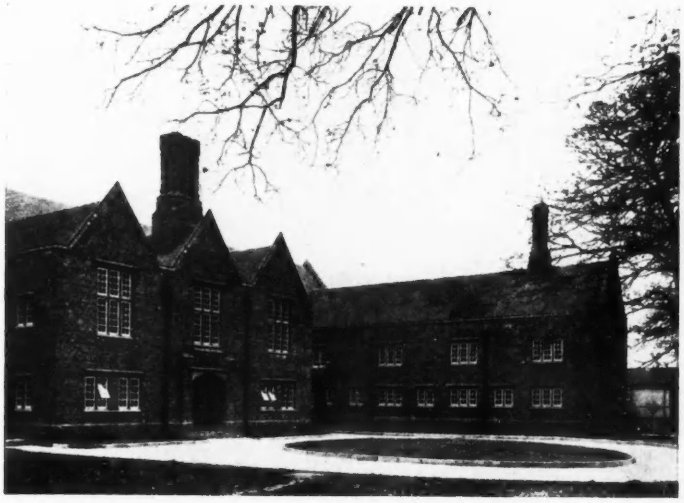
One reason for the widespread use of electricity in the United States is the fact that fittings and appliances can be used in different areas having different sources of electricity supply while replacements can be obtained without difficulty anywhere because manufacture, and consequently stocks, are standardized.

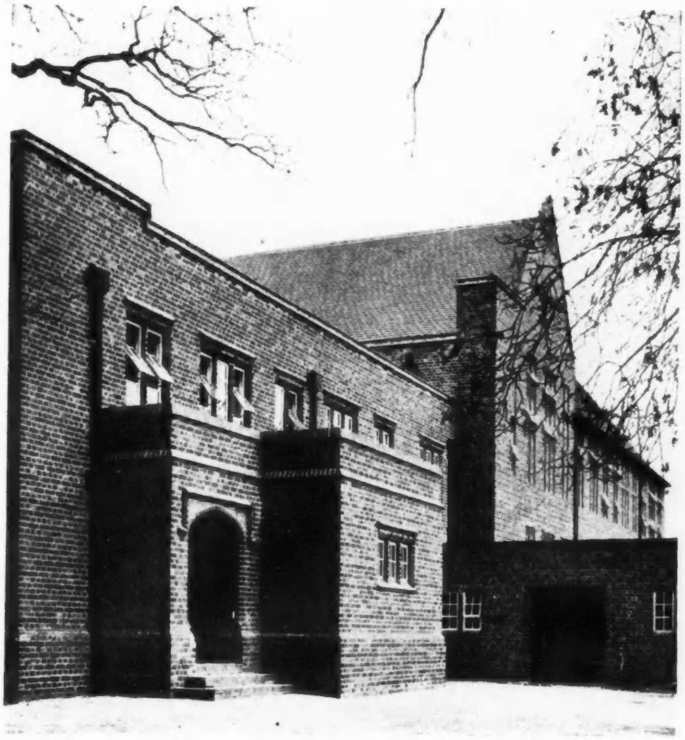
In this country we seem to be in a similar position to that years ago when motor cars were made without any regard to standardization of sizes or parts. Now that electric lighting, heating and labour-saving appliances can do so much to help the householder it seems a pity that this remaining difficulty, which becomes very real when one moves into another house, should not be overcome by the manufacturers concerned.

C. R. TAYLOR

*[Owing to pressure of space we have been compelled to hold over a number of letters until next week.—*ED., *A.J.]*

SCHOOL AT HARROW WEALD





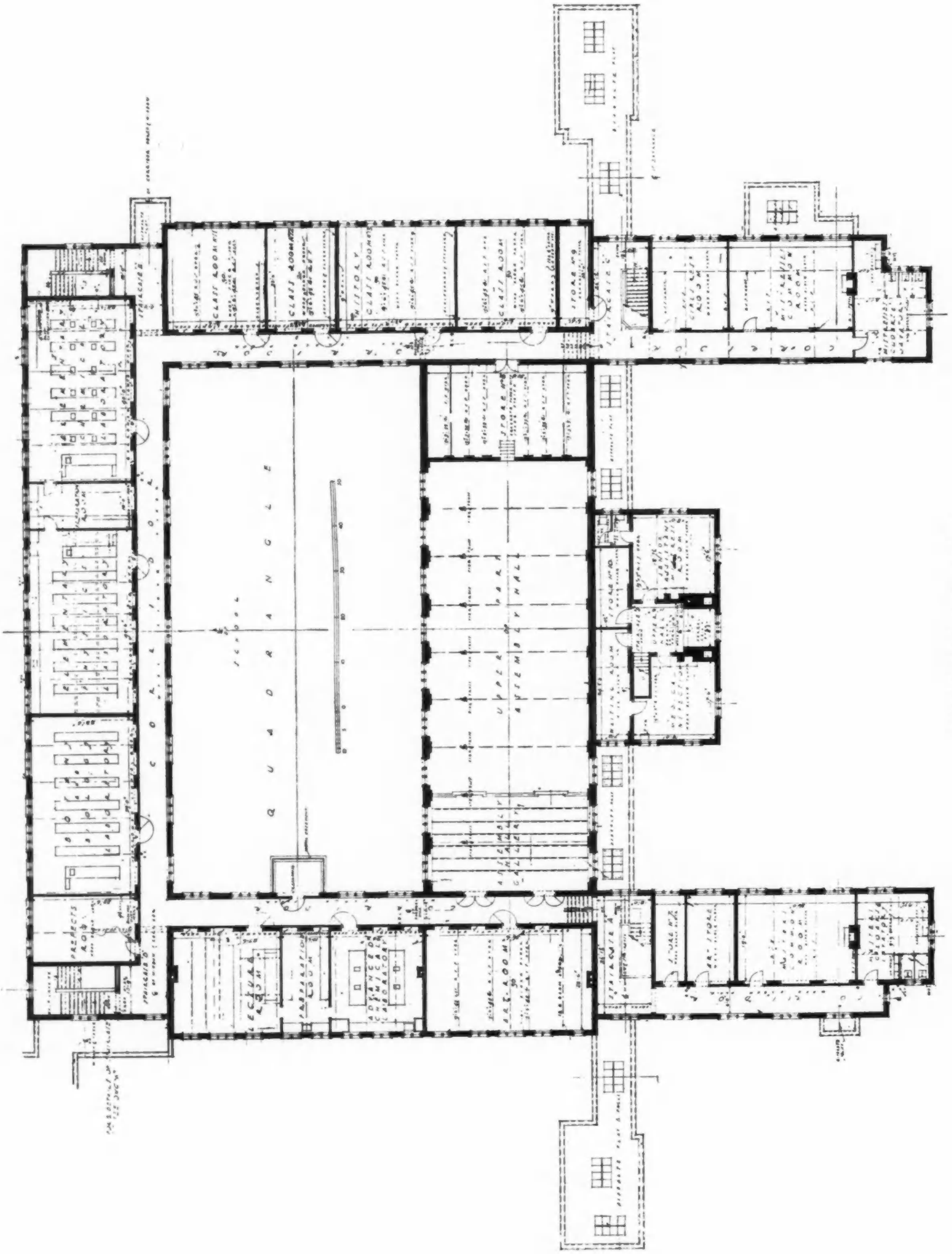
This school, designed by the Middlesex county architect, occupies a site of 6 acres on the east side of Brooks Hill, Harrow Weald, and accommodates 505 scholars. The cost was approximately £40,000.

The building is faced with multi-coloured bricks and roofed with red hand-made tiles. Internally the walls are plastered, except in laboratories and workshops, where they are finished in fair-face brickwork. Floors and staircases are in reinforced concrete. Heating is by low-pressure hot water apparatus from duplicate boilers, the circulation being accelerated by means of an electrically driven pump.

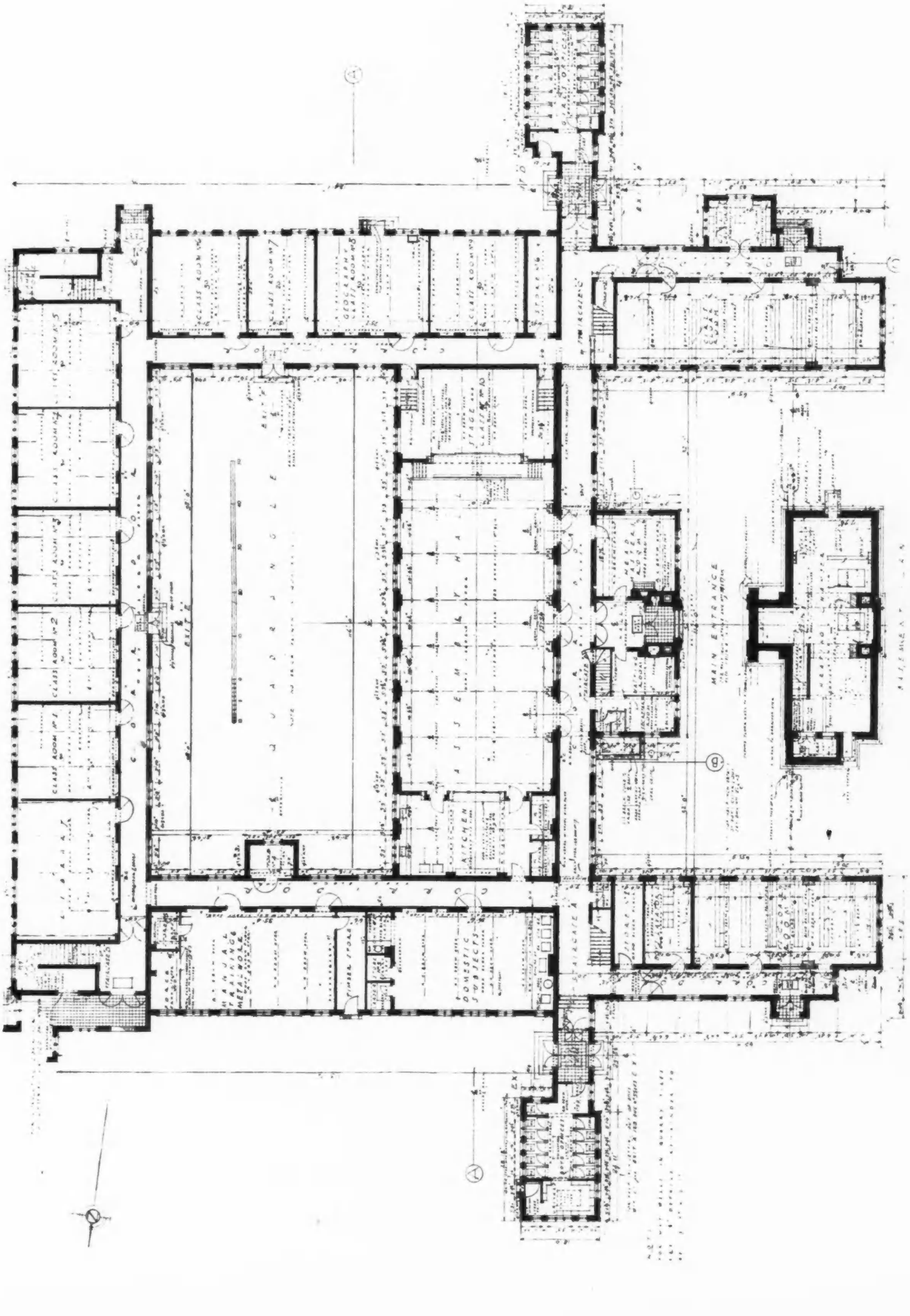
Plans of the school are given on the two pages following.

DESIGNED BY W. T. CURTIS

SCHOOL, HARROW WEALD, MIDDLESEX


SCHOOL QUADRANGLE
CORRIDOR
UPPER PART ASSEMBLY HALL
ASSEMBLY HALL GALLERY
CLASS ROOM
HISTORY CLASS ROOM
STORE
LECTURE ROOM
PREPARATION ROOM
ADVANCED CHEMICAL LABORATORY
PREFECTS ROOM
STAIRCASE

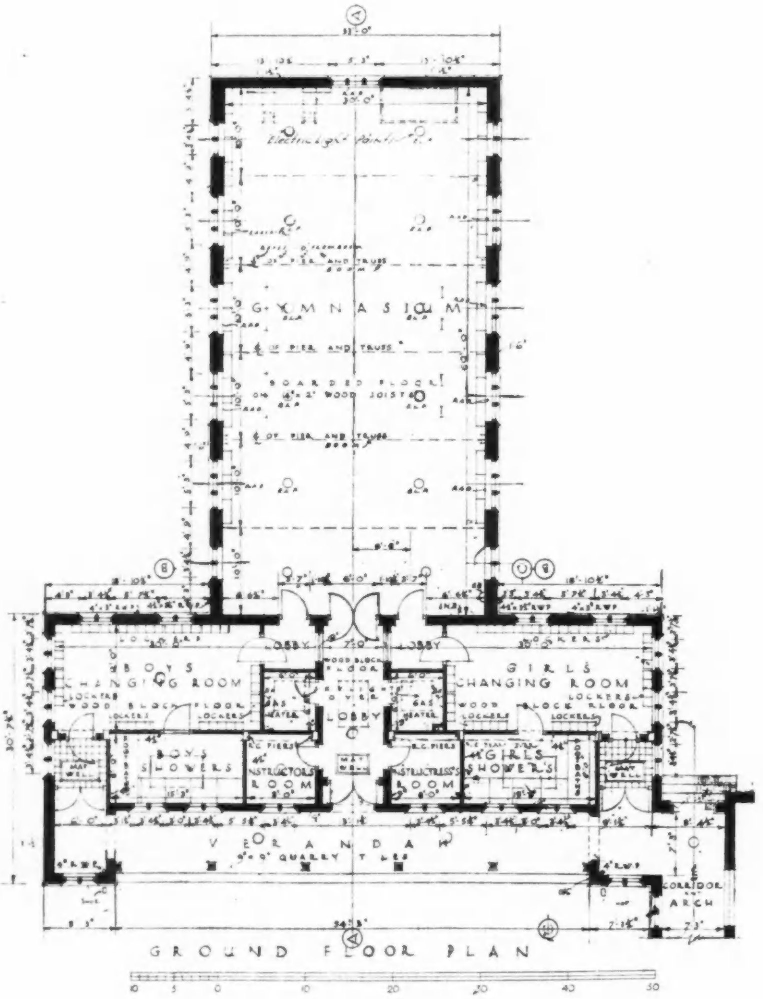
FIRST FLOOR PLAN


CLASS ROOM No 1
CLASS ROOM No 2
CLASS ROOM No 3
CLASS ROOM No 4
CLASS ROOM No 5
CLASS ROOM No 7
GEOGRAPHY ROOM
QUADRANGLE
ASSEMBLY HALL
STAGE
KITCHEN
MAIN ENTRANCE
DOMESTIC SUBJECTS
MANUAL TRAINING
TIMBER STORE
STAIRCASE
CORRIDOR
EXIT
A
B
C

GROUND FLOOR PLAN

DESIGNED BY W. T. CURTIS (*Middlesex County Architect*)

SCHOOL AT HARROW WEALD



Plan of the gymnasium block of the school illustrated on the preceding pages.

SOCIETIES AND INSTITUTIONS R. I. B. A.

CONTEMPORARY LONDON BUILDINGS

Following are extracts from an address with the above title given to the R.I.B.A. on Monday evening last, December 4, by Mr. Charles Marriott, Hon. A.R.I.B.A.

A SHORT time ago I met a very famous Italian critic of the fine arts, and in the course of conversation I asked him whom he regarded as the greatest æsthetic philosopher of modern times. He said Ruskin; which, as I think you will agree, was a surprising answer from a Latin. A little further questioning made it clear that my Italian critic was fully aware of Ruskin's shortcomings: his many doubtful remarks about the arts in general and architecture in particular, and his habit of obscuring his meaning with Old Testament language; but my critic maintained that, when everything had been said against Ruskin, he still stood out by virtue of his persistent refusal to detach the arts from their context in life; from their connections with religion, morals, ethics and, above all, economics and sociology. Later philosophers had avoided Ruskin's mistakes, and had cleared up our ideas about the æsthetic element itself, but they were inclined to simplify the problem by leaving out some of the factors, at the risk indicated in the old surgical jest, "The operation was completely successful, but the patient unfortunately died." That is to say, they had treated a living organism as a case.

I shall try to base my remarks upon contemporary London buildings on the observed connections with life which Ruskin, with all his faults, never ignored, and which you, being in the architectural procession, may not have the same opportunity to consider as the man who looks out of the window.

When I survey the London which has grown up in my own time I find that, speaking generally, my satisfaction increases with the buildings based upon some definite utility, material or moral, which, though it may suffer in detail from the general disorganization of our era, is nevertheless of a kind which would have to be carried on in any circumstances, and is, therefore, reasonably well adapted to future progress. First of all, I should place the Underground Headquarters at St. James's Park, designed by Messrs. Adams, Holden and Pearson. It is, to begin with, designed in what I conceive to be the standard form for large office blocks in a city, it is planned closely to its function, and it is satisfying in mass and proportion. I do not think I am detracting from the genius of the architects of this building when I say that the obvious thing about the Underground is that it is a remarkable efficient institution, one of the most efficient in view of its purposes and the probabilities of the future, of our times. This efficiency is being reflected architecturally throughout the system; in the stations of the extensions to Morden and Cockfosters, for instance, each with its grasp of the local situation and tactful response to local surroundings.

THE ADVENT OF ELECTRICITY

Even more far-reaching than the Underground in the social implications of its utility is the grid system of electrical distribution. It is true that its possible advantages to the community at large are at present delayed by the activities of that picturesque survival, the business man, as reflected in the anomalies in the price of electricity in different districts, but every contract comes to an end sooner or later. In itself the grid is a public benefit, and I think you will agree that its architectural expression is, on the whole, orderly. The November number of *The Architectural Review* gave some striking evidence to this effect. The rural landscape is not my province tonight, but I may say that I have seen few landscapes that were injured, other than sentimentally, and many which were actually improved in coherence by the march of pylons—designed, I believe, by Sir Reginald Blomfield. Connected with the grid in principle, if not in fact, we have here in London the new Battersea power station, designed by our President. When that power station is completed, and the unresolved duality of its two chimneys corrected by perspective, I believe that it will be recognized to be one of the finest recent buildings in London. I could wish that Sir Giles Scott had had the full courage of his chimneys, but I am prepared to believe that some faint flavour of a capless column—a sort of "Good-bye to all that"—may have its symbolical value.

With some reservation about its decorations and the relation of material to form, the new Freemason's Hospital, by Sir John Burnet and Tait and Lorne, strikes me as a very good building. It is the first hospital that I have seen—and I have had some institution experience—which really takes into full account the mental and moral aspect of healing ; which is, that is to say, in the true sense functional. Other recent buildings which come to mind as being shaped closely, with order and proportion, to their total functions are the new Horticultural Hall, by Messrs. Easton and Robertson, Hay's Wharf, by Professor Goodhart Rendel, and Universal House, Southwark Bridge, by Mr. Joseph Emberton.

CHURCHES, THEATRES, CINEMAS

It may surprise some of you that I should class churches among buildings based upon realities in the social scheme, but you may remember that I spoke of moral as well as material utility. There is no lack of new churches, but, except where as at Liverpool and Guildford, there is opportunity for a cathedral, they tend to be modest buildings, recalling the edifices of early Christianity, and suggesting that, now as then, the power of religion in the social scheme is more akin to that of the grass that lifts the paving-stone than to that of politico-economic domination. As they know in Russia, in present circumstances religion is a subversive power—the still small voice as compared with the big noise. Among recent churches which seem to me to be true to the realities of the situation, and to gain architecturally thereby, are St. Catherine's, Hammersmith, by Mr. Robert Atkinson, the church for the deaf and dumb, Acton, by Mr. Edward Maufe and the Wesleyan Church at Walworth by the same architect, the Church of the Annunciation, Quebec Street, by Mr. Walter Tapper, and St. Barnabas, Dalston, by Professor Reilly.

I shall make no apology for following churches with theatres, for they also serve a moral utility, that of recreation. In them, however, I cannot help feeling some compromising taint of polite fiction—the necessity for the architect to pretend that, to invert an old saying, the play is *not* the thing. The truth is that the theatre in England is still too much of a social function in the wrong sense of the words ; and we shall not get a first-rate theatre, from an architectural point of view, until no seat in the house costs more than half a crown. It is true that the older theatres were ornate, but in those days there really was a social pageantry. Of recent theatres in London, the new Cambridge Theatre, by Messrs. Wimperis, Simpson and Guthrie, with interior treatment by Mr. Chermayeff, and the new Sadler's Wells, by Frank Matcham, strike me as the most successful in moulding themselves upon the idea of the play. Cinema theatres are improving—the new Victoria Palace, by Messrs. Trench and Wamsley Lewis, and the Ambassadors, at Hendon Central, by Messrs. Henry F. Webb and Ash, may be quoted—but they still reflect the curious lack of conviction in the film business itself in the sufficiency of the film as form of entertainment. Too much is given away with the pound of tea to inspire confidence in the quality of the tea.

DOMESTIC ARCHITECTURE

In domestic architecture we are, as always, upon firm ground, subject to the national sentimentality—which works both ways, according as there is more emphasis upon past or present than the circumstances demand—and the national resistance to the idea of communal living. The last is rather odd, because we have always been successful in what, with admirable economy of language, a contemporary German architect described as "typing and rowing"—that is to say, designing a satisfactory type of house and grouping houses together. The greatest obstacle, one would say, to progress in domestic architecture in present circumstances—and this applies to more things than houses—is the fear of standardization. Possibly from lack of real individuality in themselves, people seem to be afraid of looking like their neighbours. But within these limitations our splendid tradition, the best in the world, goes on. From the nature of the case there are not many new individual houses in London—for good examples of the kind one has to go as far afield as Welwyn Garden City—though the recent houses in Hampstead, designed by Mr. C. H. James, must not be forgotten—but there have been some excellent blocks of flats, including tenements for working people.

BOGGIER PATCHES

It is when we come to the boggier patches in the social plan, corresponding to commercial activities, that the results in contemporary London buildings give me less satisfaction. It is here that the anomalies of a period of transition are most directly reflected in architecture. To telescope the change which is affecting architecture, the bank, which was once a Temple of Mammon, has become for practical purposes a clearing house of credit. It is not my business to suggest how such a clearing house should be controlled in the best interests of the community at large, but it evidently demands its own architectural expression. Unfortunately, the Temple of Mammon idea dies hard, and so, in designing a bank, the architect has to provide for a reality and at the same time pay tribute, with columns and things, to a polite fiction. He has to plan for a clearing house and, at the same time, suggest a Temple.

The opportunity for the architect of designing to reality in banks will only come when banking itself has come into line with the realities of the economic situation.

Shops raise a special problem. In itself the idea of a shop is simple enough—the last link in the chain of distribution with a legitimate profit for the labour involved. That is all there is to it, and up to about the middle of the nineteenth century the shop remained true to its modest function, and its architectural expression was correspondingly modest. Unfortunately—and much further back in the chain than the shopkeeper himself—some bright spirit discovered that there was more money to be made out of juggling with the laws of supply and demand than by letting them work automatically. The effect was to create a condition called "sales resistance," which has to be overcome by obscuring the plain and respectable business of shopkeeping with words like "salesmanship," "merchandising," "marketing" and "service" ; words which would have no meaning in a properly organized system of distribution. It is not the fault of the shopkeepers ; you cannot have it both ways ; and, having constructed an elaborate machinery for holding things up for profit, it is no use blaming one of its cogs for not letting them through.

What concerns me is the problem of the architect, well aware, as he generally is, of what shopkeeping ought to be, who is called upon to design a modern palace of merchandising. He would be disloyal to his client if he refused to take part in the selling campaign. What he has done, it seems to me, is to persuade his client of the advantages of seduction over assault in breaking down the icy barriers of reserve ; the tempting display of a few articles in a simple and well-designed setting instead of serried ranks of all the Orders. I cannot but believe that shopkeeping as well as architectural effect in the street gains thereby.

PUBLIC BUILDINGS

I do not propose to discuss in detail the many public or semi-public buildings recently erected in London—such as India House and Africa House, by Sir Herbert Baker, the Port of London building and the new Lloyds, by Sir Edwin Cooper, the Masonic Peace Memorial, by Messrs. Ashley and Newman, the Wellcome Museum, by Mr. Septimus Warwick, and the new Geological Museum by the architects of the Office of Works. They all have great architectural merits, but, having regard to their purposes, most of them, it seems to me, present to some extent the Laocoon spectacle of form strangled in style. Most of their plans are better than their elevations. They are overdressed—not necessarily in the sense of too elaborately dressed, but in the sense of too much architectural clothing.

What I feel in looking at the buildings named is that they are too much designed to look like something—as if they were designed for stage settings, in which, of course, architecture does take on a representational function. I cannot help feeling that the example of Inigo Jones, who designed both masques and buildings, is partly responsible for this confusion of aim. When somebody tells me that the elevations of the buildings named are, in fact, well related to their plans, I feel it to be irrelevant—as if somebody told me that a stage setting would, in fact, afford domestic accommodation to the stage hands. That is not its purpose. Nor is representational character confined to traditional buildings. To take a case in point, while Mr. Emberton's Universal House is functional, his new Olympia strikes me as representational architecture—designed to look like a modern building.

THE ARCHITECT AND ENGINEER

Given the conditions of modern life I see nothing, from the lay-out of roads and railways to the design of petrol pumps, that is not strictly an architectural problem. Mark Twain's jest, that the Almighty appeared to have created Italy from designs by Michelangelo, has become a fair statement of what—from a variety of causes—we require of the modern architect. Nor do I see any confusion whatever between the functions of the architect and the engineer. They are to shape and to construct—two essentially different things, though they should be pursued in close collaboration. The common confusion between them is due, I suppose, to the fact that the same individual may possess the two capacities—the constructional and the shaping. Michelangelo himself was a case in point; but the typical modern example was, I suppose, Rennie. But even in the same individual the two capacities are distinct, and, as a rule—and increasingly so in the complexities of modern life—one or the other is more pronounced in different individuals. If an engineer happens to have the shaping capacity he is potentially an architect, and that is all that there is to be said about it. The rest is, a matter of special training, and life is not long enough to train a man as both architect and engineer.

Chadwick Trust

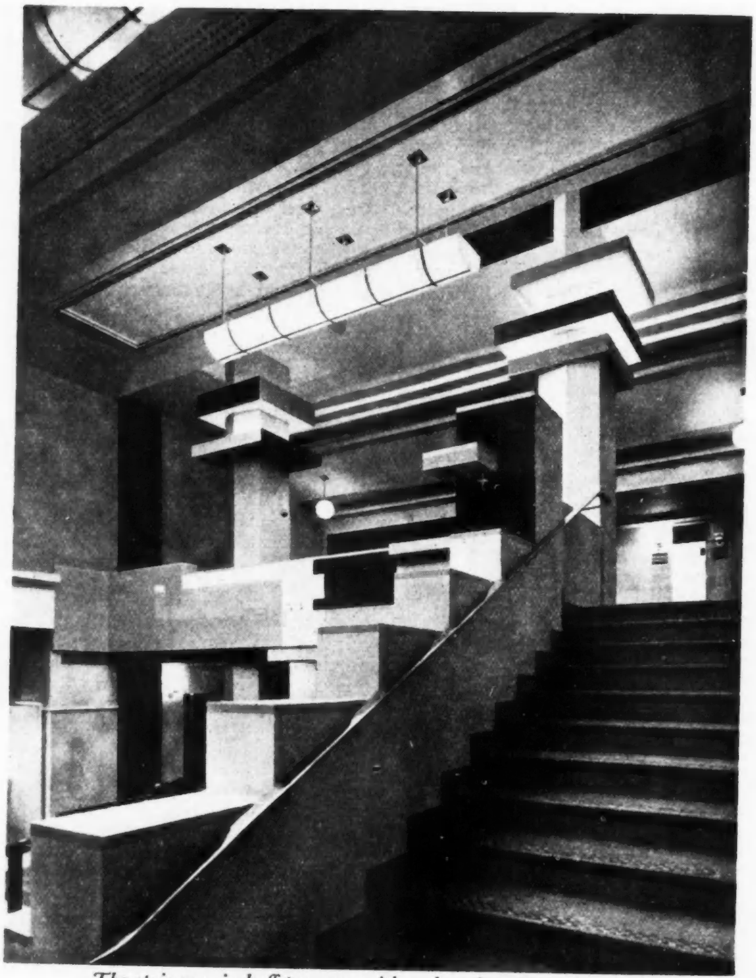
"The One-Pipe System of Drainage" was the subject of a "Bossom Gift" Symposium, held recently at the London School of Hygiene and Tropical Medicine, under the auspices of the Chadwick Trust. The symposium was given by Dr. Charles Porter and Mr. W. H. Draper.

Dr. Charles Porter said that, though commonly described as "new," the one-pipe system had actually nothing particularly new about it. Since in its construction there were many more than one pipe, it was doubtful if the description "one-pipe" applied to it, though convenient, was quite accurate. In tracing the history of the development of the system, which was coming to be more and more frequently employed in the drainage of large buildings, such as hotels and blocks of flats in the metropolis, he showed that in all probability it was the only system in the early days of sanitation. Largely it was because defective drainage was accounted responsible for outbreaks of enteric and other fevers that demand for improved sanitation was made. The schemes devised sought to keep drain emanations from entering buildings by insisting that all drains should, as far as possible, be outside the premises: that the different classes of wastes should be kept separate, and a complete and complicated scheme of trapping employed. In this way there grew up what he described as the British standard multiple-pipe system.

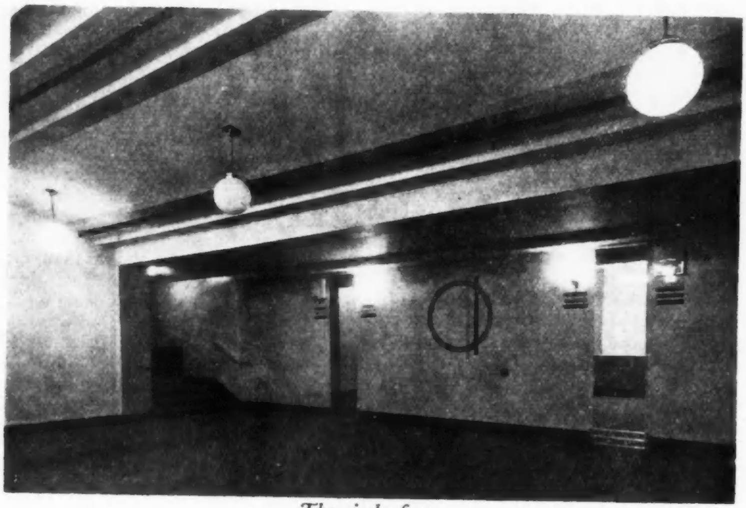
With increased demands for sanitary appliances of all sorts, and in the case of hotels and more expensive flats for bathrooms *en suite* with sleeping rooms, the older system was inapplicable. In America, certain European countries and the East this was recognized many years ago, and today practically nowhere else but in Britain was anything but the one-pipe system or some modification of it seen in hotels and flats, and even ordinary dwelling-houses. Climate may have had something to do with this development, but undoubtedly also it implied recognition of the need for sanitary advance, much of which had been based upon research and experimentation. In London, the L.C.C., as the bye-law-making authority, have in course of preparation bye-laws approving the introduction of the system. Already, however, certain London borough councils, and conspicuously the St. Marylebone Borough Council, had waived existing requirements and had permitted the adoption of the scheme for hotels and large blocks of flats.

From the point of view of hygiene there appeared to be no question that the system had advantages, and on grounds of economy there seemed a certainty that it had very real claims also. Mr. Draper, who discussed the question from the technical and practical side, stressed the importance and necessity of sound workmanship. The choice of material for the various pipes and the trapping and ventilation of the several fittings were fully discussed.

DECORATIONS TO



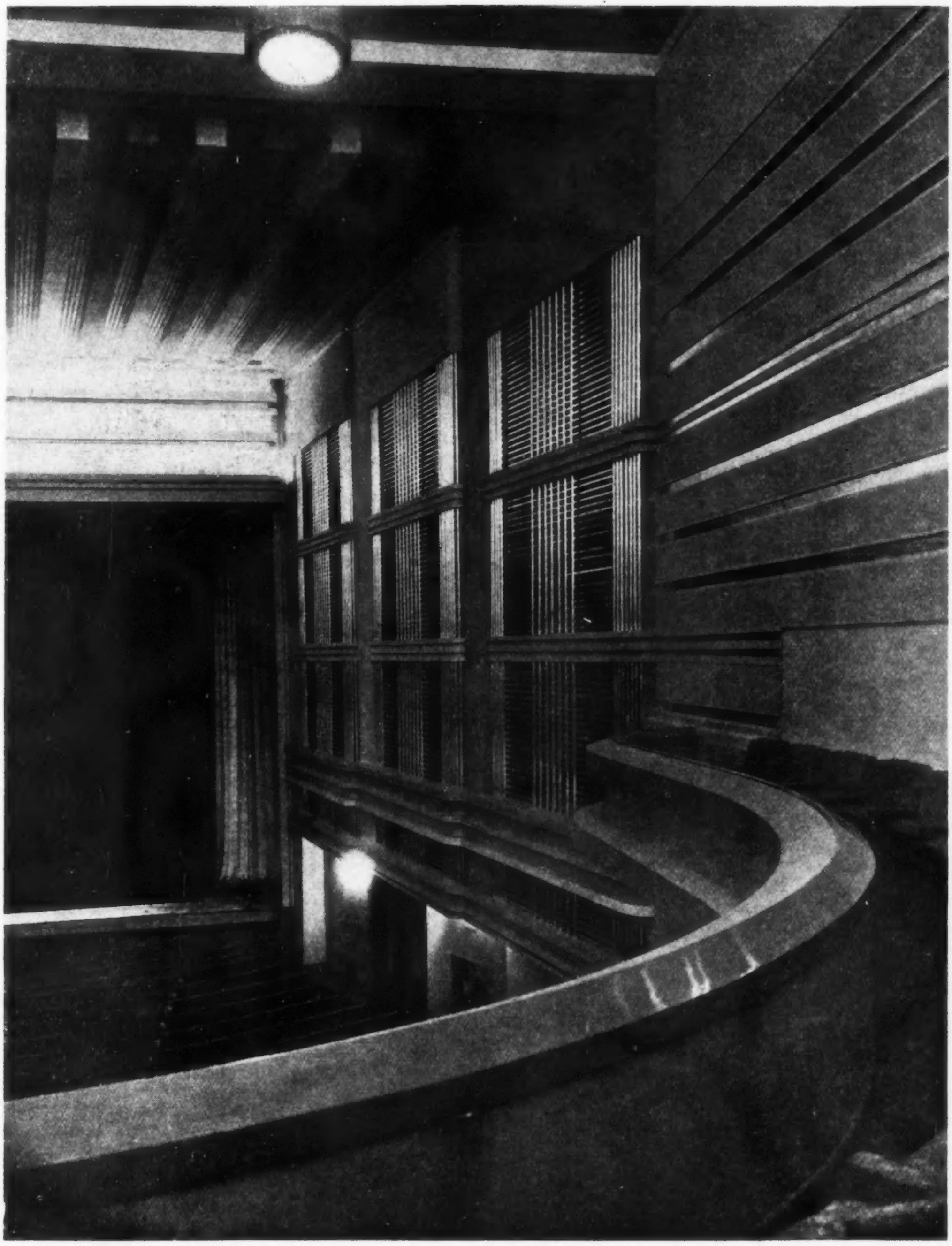
The staircase, in buff terrazzo with a chromium-plated handrail.



The circle foyer.

FROM THE DESIGNS OF

A CINEMA AT EDMONTON



This cinema, holding 2,500 people, has been built on the site of the old Edmonton Empire Music Hall. The architect for the building was Cecil Masey; and for the interior, which is here illustrated, Theodore Komisarjevsky.

In the auditorium, a view of which is given above, looking from the back of the circle towards the stage, the prevailing colour is sealing-wax red for doors and joinery generally, with a darker red for seating and carpets. The organ grilles on the side walls of the auditorium are aluminium, and the acoustic plaster panels above the ends of the circle have recessed strips, also in aluminium.

THEODORE KOMISARJEVSKY

PERIODICALS

NOVEMBER ANTHOLOGY

This is the second of a series of reviews of Continental and American architectural periodicals. The first appeared in our issue for November 2. We propose to publish a similar summary and commentary at the begining of each month. This series is not entirely new to the JOURNAL, *but is the revival of a similar feature published some years ago.*

AMERICA

The Architectural Record.
(Monthly 50 cents.)

NOVEMBER, 1933. Time Zoning as a preventive of blighted areas; article by K. Longberg-Holm. The functions of a city are conditioned by the nature of the control machinery with which private enterprise is limited and correlated. The existence of urban blight indicates the failure to cope with changing conditions. This article diagnoses blight as a factor of growth, and evaluates relative efficacies of zoning measures as blight prevention.

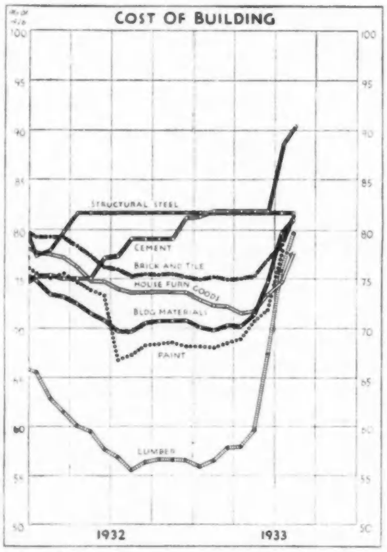


Chart showing present-day cost of materials used in building in the U.S.A. as percentage of 1926 level.

[THE ACHITECTURAL RECORD]

Space-time zoning is proposed as more effective than the present space zoning.

Standardized pre-cast concrete members in the Housing Scheme at Bagneux, Paris, Baudouin and Lods, architects.

Heating and ventilating equipment for small houses; technical article with illustrations, by T. F. Dockwell.

The Architectural Forum.
(Monthly $1.00.)

October 1933. The "Forward" House. *The Architectural Forum* invited eight prominent architects: H. W. Corbett, Arthur Harmon, Raymond Hood, E. J. Kahn, Leonard Schultz, W. V. Alen, Ralph Walker and G. White, to contribute designs for small houses to an exposition of modern living conducted by a New York store. From their plans and elevations models were built by unemployed architects, by arrangement with the Architects' Emergency Committee of New York. Photographs of the models with plans, descriptions and brief explanations of the philosophy behind the designs are printed on eight pages of this issue.

Designing the Distillery; topical technical article by J. H. Callender, illustrated by diagrams showing lay-out of plant, distillery flow chart, bonded warehouses, etc.

Building Money; monthly section devoted to reporting news and activities of building finance, real estate, management and construction.

●

BELGIUM

La Cité.
(Monthly 5 Frs.)

No. 9. 1933. This number contains various documents and articles dealing with open-air swimming baths and beaches. In it will be found, in addition to an illustrated description of the remarkable Wetzlarbad, Eupen, by Helg and Dauven, several works and projects by Belgian architects, and notes on the general regulations obtaining in the U.S.A. in connection with swimming baths. In view of the abundance of material, *La Cité* proposes to complete the information on the subject in a future issue.

Architecture et Urbanisme.
(Monthly 10 frs.)

School of Navigation at Antwerp, by J. and M. van Kriekinge, for the directors of the Association Maratime, Belge. Brick and concrete construction; "modernistic" treatment.

The rational construction of reinforced concrete foundations for machinery; illustrated article by I. Katel.

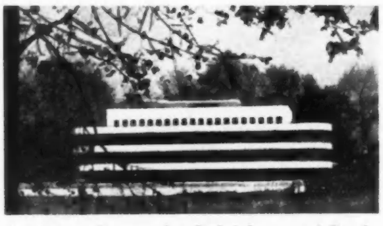
●

CZECHOSLOVAKIA

Styl.

Nos. 4-5, 1933. Sound film studio group (two studios) Barrandov, Prague, by Max Urban; photographs and clearly drawn plans and sections.

Three architect-designed speculatively built houses on Barrandov—a newly developed, architect-controlled hilly building site on the outskirts of Prague. Lay-out plan for whole site, by Max Urban.



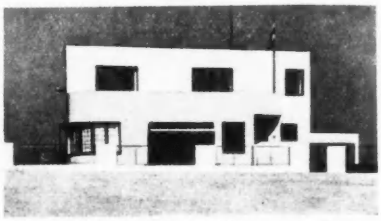
Creche at Berne, by Salvisberg and Buchkuhl. [LE TECHNIQUE DES TRAVAUX]

●

FINLAND

Arkitekten.
(Monthly.)

No. 9. 1933. Military Hospital at Viborg, projected by the technical department of the Ministry of Defence (Architects Elovaara, Borg and Sahlbom). The hospital is for a total of 580 patients, of which number about one-third will be accomodated in the building already completed. The ground floor is for the administrative department, dwellings, etc.; the first floor for the reception department, dispensaries, eye-patients, and nurses' rooms; second floor for the operating theatre, the Röntgen department and the surgical hospital; third floor for physiatrical and surgical department; the fourth for diseases of the ear, throat and nose. This up-to-date hospital, which has a monumental exterior and modern interior, is illustrated by some 25 photographs and drawings.



Speculatively built house, Barrandov, Prague, by Max Urban. [STYL]

●

FRANCE

Le Technique des Travaux
(Monthly 10 frs.)

Belgian State Marine School, Ostend, by P. J. J. Verbruggen, built with reinforced concrete frame and brick sheathing.

Swimming Bath "La Jonquière," Paris, by Lucien Pollet; plans, section and photographs.

Creche at Berne, by Salvisberg and Buchkuhl, large building on four floors.

New dam near Seattle, Washington, U.S.; photographs and construction details.

●

GERMANY

Moderne Bauformen.
(Monthly 3 R.M.)

No. 11, 1933. Entire issue—67 pages—devoted to photographs, plans, and constructional details (10 pages) of Wooden Houses in the "German Timber" Exhibition colony at Kochenhof, near Stuttgart. There are 25 houses: 16 detached one-family houses, 6 semi-detached, and one large tenement. A few of the houses are entirely of wood; the remainder have timber frames with an infilling of brick, pumice, patent slabs or composition; lined internally with building board and with stucco on the outer face; windows flush with external wall face roofs; pitched at 35°.

The houses, having small windows and

little in the way of balconies, terraces, etc., are not considered cheap at the 25 R.M. per cubic metre they cost to build.

Admirable timber house construction reference number.

Der Baumeister.
(Monthly 3 R.M.)

The New "Allianz" Office Building, Cologne, by Architect Wach and Government Building Councillor Rosskotten.

A State High School for Building in Weimar. (Students' Work.)

A bedroom arrangement by the furniture maker J. Hallhuber, of Munich.

The "German Timber" Exhibition, Stuttgart, 1933. (19 pages of photographs, plans and sections of timber houses: five supplementary sheets of constructional details.)

Monatshefte für Baukunst.
(Monthly 1.90 R.M.)

No. 11. 1933. Wooden houses at the "German Timber" Exhibition, Stuttgart, 1933; photographs of houses completed and under construction; plans and detail drawings.

Lay-out plans and type-houses submitted in competition for development of housing estate in Berlin-Dahlem.

The fight against the slums in England: article by Alexander Block.

Innen Dekoration.
(Monthly.)

Utilitarian Furniture, article by Ludwig Kozma, illustrated by photographs and plans of houses and furniture, at Budapest, designed by Ludwig Kozma.

The German spirit in New Buildings and Dwellings; article by Wilhelm Michel.

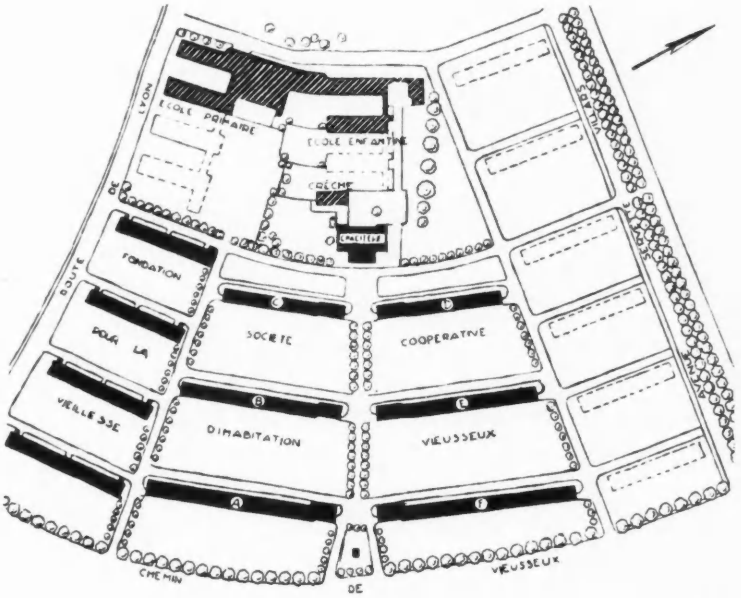
Die Form.
(Monthly 1.25 R.M.)

No. 10. 1933. Article on plastering, rendering and concrete finishes, by Otto Ruckert, illustrated by numerous photographic details of plaster and cement surfaces.

Bauwelt.
(Weekly.)

Nov. 2.—Equipment for the domestic laundry: illustrated article by Dr. Zinkaun.

Lay-out plans and type-houses submitted in a competition for the development of a housing estate in Berlin-Dahlem: (Seven selected lay-outs, "garden city" type).



Lay-out plan for the Citta Cooperativa de Vieusseux. [IL POLITECNICO]

Nov. 9.—Architectural backgrounds for Nazi demonstrations.

Nov. 16.—Church of St. Thomas, Berlin-Charlottenburg, architect: Paul Linder.

New Crematorium at Meissen, architect: Rudolf Pfitzmann.

Deutsche Bauzeitung.
(Weekly.)

No. 44.—The Building of Dwellings and Housing Colonies in the year 1933, by Professor Dr. Schmidt, Ministerial Councillor, Berlin.

Electric Heating in Dwelling Houses.

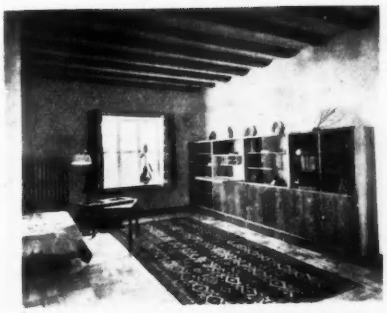
The Otto-Moricke Tower (Youth hostel combined with reinforced concrete water-tower) Constance: by Government Architect Schumacher.

South elevation of a house in Budapest, by Ludwig Kozma.
[INNEN DEKORATION]

Canoeing-club boat-house (club rooms, dormitory, and store for 90 canoes; two stories) by Government Architect Reissman, Mittweida.

No. 46. Increase in the economic value of settlement and dwelling-house building through building research work; illustrated article by Hans Kammer.

The installation of tanks and pumps in petrol stations; illustrated article.



Interior of wooden house at the "German Timber" Exhibition, Stuttgart, 1933.
[MODERNE BAUFORMEN]

No. 47. The future University City in Rome; architect, Marcello Piacentini, Rome.

The use of bituminous materials in special cases; illustrated technical article.

Exhibition by the pupils of Professor Tessenow: schemes for wooden dwelling houses, etc.

●

HUNGARY

Tér Es Forma.
(Monthly.)

No. 11. 1933. Budapest building problem, by Dr. Bierbauer Virgil: (part IV). Differentiation of the zones, according to the methods of building, with photographs and plans of apartment houses in Budapest.

In deference to the wishes of readers,

Tér és Forma publishes in this issue a further part of Dr. Virgil's study, although the whole work has now appeared in book form.

●

ITALY

Il Politecnico.

No. 10. 1933. The effect of wind pressure on structures; long illustrated article (24 pages), by Santo Partanni.

New system of reinforced concrete bridge construction applied to a bridge over the grand canal, Venice: description illustrated by photograph and drawings of centering, reinforcement and piling.

The co-operative city of Vieusseux; lay-out plan and photographs of blocks of dwellings.

Rassegna di Architettura

(Monthly.)

October, 1933. Competition for an office building for the Lombard Provinces Saving Bank in Milan; projects by A. Annoni, M. Faravelli, R. Ferrini, A. Minali and P. Portaluppi.

Projet for an Airport, by Ruegenberg e Ritscher.

Projet for a double Stand (two stands back to back), for spectators at football and tennis matches, designed in reinforced concrete by Alfredo Fineschi.

●

JUGO-SLAVIA

Arkitektura.

(Monthly.)

Nov. 10, 1933. Introduction to the Principles of Town Planning: illustrated article by Marko Vidakovic (18 pages.)

●

SPAIN

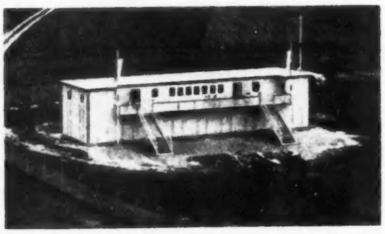
A.C.

(Quarterly.)

No. 11. Report on IV Congress, C.I.A.M., with photographs taken in Athens and on Patris II by members of Spanish Group.

Minimum dwellings, two-storey terrace type, by G.A.T.E.P.A.C. (Spanish Group C.I.A.M.); photographs, plans, sections and detailed description.

Housing and school projets, Barcelona, by G.A.T.E.P.A.C.



Canoeing Club boat-house, with club room above. [DEUTSCHE BAUZEITUNG]

●

SWEDEN

Boet.

(Monthly 1.50 kr.)

No. 9. 1933. The Swedish exhibit at the Chicago World's Fair; pottery, silver-ware and furniture.

Byggmastaren.

(Monthly.)

No. 31. The Chicago Exhibition, and modern architecture in America; illustrated article by Gotthard Johansson.

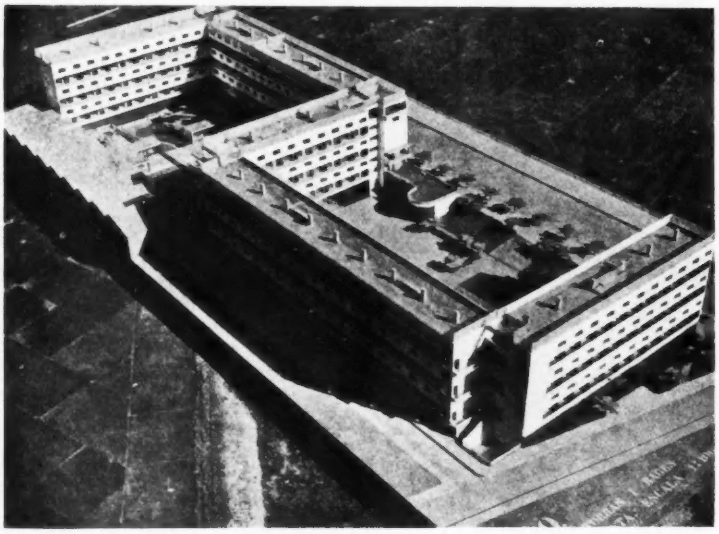
No. 32. Works at the New Boras aqueduct, by Harald Ericson. Modern industrial building, Lovö, by Paul Hedquist.

Large open-air swimming baths at Boras and Alingsas, by Harald Ericson; photographs and plans.

No. 33. Ventilation in the Dwelling House; illustrated article by Axel Danielson.

On calculating the most economic spacing of joists on concrete floors between steel beams; illustrated article by Karl-Axel Siljestrand.

Periodicals reviewed in these columns may be ordered through The Architectural Press, 9 Queen Anne's Gate, S.W.1.



Housing projet, Barcelona, by G.A.T.E.P.A.C. (Spanish Group C.I.A.M.) [A.C.]

QUESTIONS THAT ARISE

Bricks from an Old House

¶ W. D. writes: "*An old house was recently demolished and a new house erected on the site. The bricks from the old building, being apparently in good condition, were re-used for some of the inside walls in the new building. The plastered walls appeared to be perfectly dry before being decorated, but have since developed large damp patches which have ruined the decorations. These appear on the ground floor only, and where the old bricks were re-used. An efficient damp-proof course was used for all walls; and the external walls were built hollow, and it is quite evident, therefore, that neither the walls nor damp-proof course are at fault.*

"*On making enquiries, I found that the old building was, for a great number of years, used as a grocery shop with store and bakery attached, and it is very probable that salt had been continually placed against the walls of the old store. I believe that this is the cause of the trouble.*

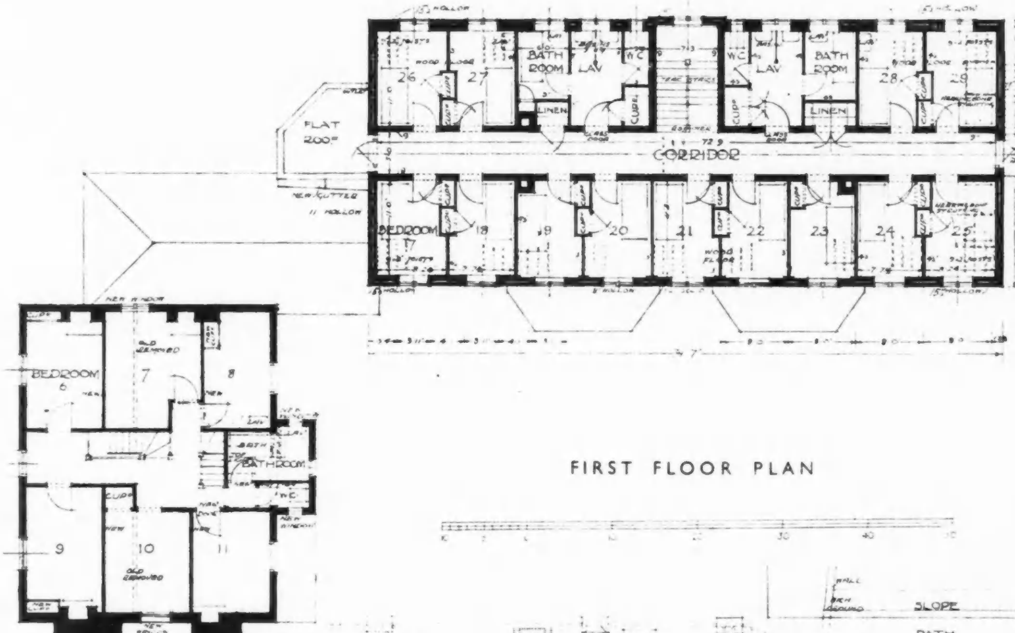
"*I would like to know whether a dressing of bitumastic paint or any other material on the surface could be relied upon to cure the dampness, or whether stripping off the plaster, and rendering, say in waterproofed cement set with hard plaster, would be effective. This would be rather expensive, and any cheaper effective method would be more acceptable. Also, could the salt be neutralized in any way to assist matters?*"

Questions of this kind frequently arise when old bricks are re-used, and it does not appear certain that the correct cause of the damp patches has been discovered. If, however, the patches are definitely proved to occur only at times when the air is saturated with moisture, it might be worth experimenting with bitumastic paint at a time when the walls were quite dry.

It is to be feared, however, that no such easy remedy will prove effective, and as an alternative to stripping off the plaster and rendering in waterproofed cement (which, in the circumstances might not be effective) it may be best to batten the walls and cover with plaster on lathing, or wallboard severed from capillary contact with the wall surface. There is no practical method of neutralizing the salts in the wall.

Fuller information as to this and similar problems can be gleaned from "B.R.S." Questions and Answers. In the last issue alone (2nd series, number 4) are two answers bearing on the case, including one (30) specifically dealing with efflorescence from old bricks, and another (31) which may suggest an alternative cause for the blotches. G.

NURSES' HOME, SEVENOAKS


BATH ROOM
LAV
W.C.
LINEN
CORRIDOR
FLAT ROOF
BEDROOM
6
7
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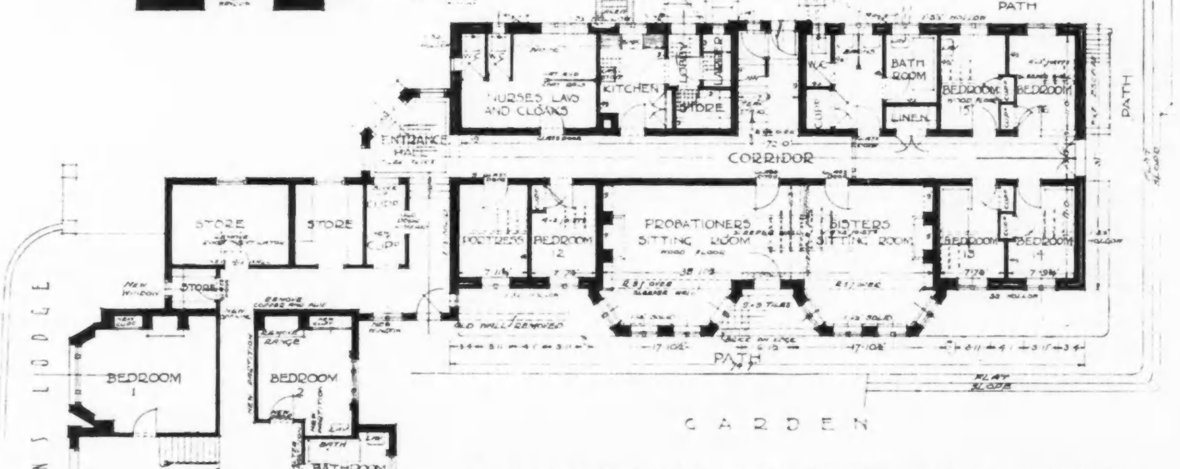
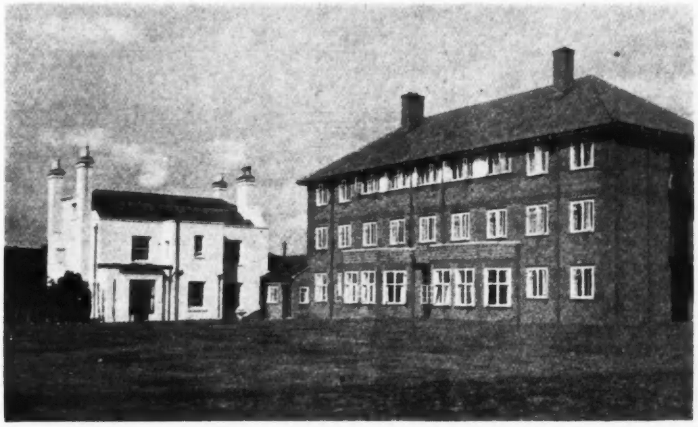
BATHROOM
W.C.

FIRST FLOOR PLAN


SLOPE
PATH
NURSES LAVS AND CLOAKS
KITCHEN
STORE
BATH ROOM
LINEN
BEDROOM
15
16
ENTRANCE HALL
CORRIDOR
STORE
STORE
PORTRESS
BEDROOM 12
PROBATIONERS SITTING ROOM
SISTERS SITTING ROOM
BEDROOM 13
BEDROOM 14
PATH
FLAT SLOPE
GARDEN
ST. JOHNS LODGE
BEDROOM 1
BEDROOM 2
BATHROOM
BEDROOM 3
BEDROOM 4
BEDROOM 5

GROUND FLOOR PLAN

The new hostel is an extension to a private house (the white building in the adjoining photograph), which has recently been acquired by the Sevenoaks Hospital as a nurses' hostel. The new portion contains 31 bedrooms, all single, and 5 bathrooms. The two sitting rooms, which, like the majority of the bedrooms, face to the south, are separated by folding screens, and can be thrown into one room, 40ft. long.



DESIGNED BY W. H. ANSELL

LAW REPORT

LAW AND PROPERTY ACT, 1925

In re Russ and Brown's Contract.—Court of Appeal. Before the Master of the Rolls and Lords Justices Lawrence and Romer.

THIS matter came before the Court on an appeal from a judgment of Mr. Justice Clauson, sitting in the Chancery Division, who came to the conclusion that where vendors had put up property for sale described as "leasehold," that prima facie meant that it was held on a head lease and that the purchaser was not obliged to accept an underlease in the absence of any statement in the particulars that the property consisted of an underlease.

Mr. G. P. Slade, for the appellants, said the purchaser was a Mr. H. V. Brown, of Mercers Road, Tufnell Park, and he attended a sale at the London Auction Mart, and purchased a lot in the sale catalogue described as eight leasehold dwelling-houses known as 11 to 20 inclusive, All Saint's Street, King's Cross. Part of the property was held for a term of 90 years from 1849 at a total ground rent of £42 a year and as to the remainder for a term of 99 years, from 1846, at a total ground rent of £30 a year. The property was sold subject to special conditions of sale set out and one of the conditions was that the title to lot one, the lot in question, was to begin with the leases under which the respective properties were held, and further, it was provided by the National Conditions of Sale, that the abstract of title to leasehold property should, unless otherwise provided, commence with the lease or underlease creating the term sold. There was also a provision that where the property sold was held by underlease, no objection or requisition should be made on that account or where the covenants by the tenant in the underlease did not correspond with the covenants by the lessee in the head lease.

Mr. Brown investigated the title and found that property was held on two underleases derived from the head lease and not on head leases, and he took the view that the vendors, Messrs. Russ & Co., had not made out such a title as he was bound to accept. Messrs. Russ & Co. then came before Mr. Justice Clauson on a summons contending that the purchaser's requisitions had been sufficiently answered, and that in accordance with the contract a good title had been shown. Mr. Justice Clauson, however, found in favour of Mr. Brown. Counsel contended that his lordship had taken a wrong view of the law and that his clients were entitled to judgment.

The Court, without calling upon Mr. Richmount, for Mr. Brown, dismissed the appeal.

The Master of the Rolls, in giving judgment, said that Mr. Slade had put forward all the arguments he possibly could for his clients, but in his lordship's view the terms of the contract and the law on the subject were too plain. It was clear that where leasehold property was sold, the contract would not be satisfied by the tender of an underlease. He could see no reason to come to the conclusion that in the present contract lease included under lease. The appeal would be dismissed.

The Lords Justices concurred.

SCHOOL PRINCIPALS

• 3 •

W. B. EDWARDS

SCHOOL OF ARCHITECTURE UNIVERSITY OF DURHAM

MR. W. B. EDWARDS, M.A., B.ARCH., A.R.I.B.A., was educated at King's School, Chester, and Liverpool University. He received his architectural training at the School of Architecture, Liverpool University, where, in 1923, he graduated with first-class honours in design. He was a Finalist in the Rome Scholarship (1921-22); and was awarded a Jarvis Travelling Studentship (1922); and the M.A. of the Victoria University, Manchester (1928).

Mr. Edwards worked as assistant in various offices in North Wales, Liverpool, Birmingham and New York, and travelled extensively for the purpose of study in France, Italy and America. For the last ten years he has been in practice in partnership with Mrs. Edwards, with an office in Manchester and at Flint, North Wales.

For the last nine years he was assistant to Professor Dickie as Lecturer in Architecture and Master in Design in the Victoria University of Manchester; and was appointed Head of the School of Architecture, in the Armstrong College of Durham University in September last, as successor to Professor R.A. Cordingley.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

A-Type Non-Parlour Houses

MAJOR NATHAN asked the Minister of Health whether he would state the number, average cost per house, and average cost per superficial foot, respectively, of A-type non-parlour houses (excluding small houses erected for aged persons under the Housing Act, 1930, and non-parlour flats) included in direct labour schemes and in contracts let by local authorities in England and Wales during the months of September and October, 1933, respectively.

Mr. Shakespeare, who replied, said that the following statement showed the particulars desired so far as direct labour schemes and contracts let by local authorities in England and Wales other than the London County Council were concerned.

Month	Number of houses of type indicated	Average cost per house* £	Average cost per superficial foot s. d.
September, 1933 . .	4,216	281	7 10¾
October, 1933 . .	6,146	294	8 1¼

* Including the cost of paths, drains and fences, but excluding the cost of land, roads, sewers and architects' fees.

Slum

Mr. Stourton asked the Minister if he would state what period he intended to fix as a time limit for the 45 housing authorities which had failed to submit programmes for slum clearance before he took steps to have public inquiries held under the Act of 1930.

Mr. Shakespeare said that the time limit to be applied to a local authority which failed to submit a programme was fixed in relation to the circumstances of the Minister's communications with the particular authority. The period must thus vary to some extent in each case.

Mr. D. G. Somerville asked the Minister whether, in the case of towns which had stated that they had no slums which merited clearance, his department had made investigation into the local housing conditions; whether any local decisions had been reversed; and, if so, in how many cases.

Mr. Shakespeare said that the reply to the first part of the question was in the affirmative. There had been a number of instances in which, after representations made by the Minister, a local authority had reviewed its first proposal and submitted a programme, but he could not give any precise figure.

Major Nathan asked the Minister of Health if he would state the total number of clearance orders and compulsory purchase orders made under Part I of the Housing Act, 1930, by the London County Council and the Metropolitan borough councils, respectively, since January 1, 1933; how many of such orders had now been confirmed by him; and how many houses would be demolished in consequence of such orders.

Mr. Shakespeare said that 16 orders relating to 624 houses had been submitted by the London County Council since January 1, 1933, of which nine orders, covering 249 houses, had been confirmed; 29 orders, covering 462 houses, had been submitted by the Metropolitan borough councils, of which 13 orders, covering 154 houses, had been confirmed.

THE BUILDINGS ILLUSTRATED

Sub-Contractors' List

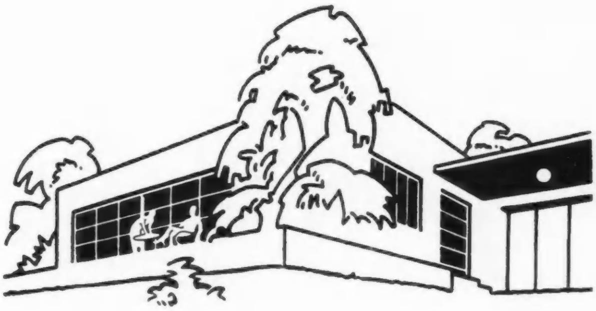
Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:—

Empire, Edmonton (pages 734-735). Walter J. Holt, surveyor: S. H. White and Sons, consulting engineers; Sub-contractors: McLaughlin and Harvey, Ltd., and McIntyre and Sons, steel; Campbell Bros., Ltd., decorations; Strand Electric Co., Ltd., exterior signs; Maple & Co., Ltd., fibrous plaster; F. Burkitt & Co., fire safety equipment; Kinematograph Equipment Co., Ltd., furnishing, seating and projection equipment: J. Jeffreys & Co., Ltd., heating and ventilating; F. Knight & Co., Ltd., ironmongery; Greenway and Ludlow, marble work; Wurlitzer, organ: Garton and Thorne, ornamental metal work: Matthew Hall & Co., plumbing; Concrete, Ltd., precast floors and steppings; Plastering, Ltd., solid plaster: Western Electric Co., Ltd., sound apparatus: Frank Mortimer & Co., stonework: Art Pavements and Decorations, Ltd., terrazzo flooring; British Vacuum Cleaner and Engineering Co., Ltd., vacuum cleaning plant.

Nurses' Home, Sevenoaks (page 739). General contractor, W. P. Banks, Ltd., who were also responsible for the electrical work. Sub-contractors: Thomas Potterton (Heating Engineers), Ltd., heating and hot water supply; H. Pontifex and Sons, Ltd., sanitary fittings; James Gibbons, Ltd., door furniture and ironmongery: F. A. Norris & Co., Ltd., escape stairs: Berry's Insulating and Building Products, Ltd., cassac flooring.

Secondary School at Harrow Weald (pages 729-732). General contractors, W. S. Try. Sub-contractors: A. D. Dawnay and Sons, Ltd., steelwork to roof trusses, etc.: Comyn, Ching & Co. (London), Ltd., heating and hot water installation: White and Mantle, Ltd., electrical installation; Smith's English Clocks, Ltd., electric clocks; Holophane, Ltd., electric light fittings: W. Sugg & Co., Ltd., gas services: William F. Rees, Ltd., tarpaving; Granwood Flooring Co., Ltd., flooring; Indented Bar and Concrete Engineering Co., Ltd., concrete reinforcement: Henry Hope and Sons, Ltd., metal windows and skylights; Stirling and Johnson, Ltd., roof tiling; T. A. Harris, Ltd., sanitary fittings: Dorking Brick Co., Ltd., facing bricks: Central Joinery Co., Ltd., flush doors; May Acoustics, Ltd., acoustic plaster to assembley hall; Carter and Aynsley, door furniture.

Staircase at Heal and Son's premises, Tottenham Court Road, W.C. (page 716). Trussed Concrete Co., Ltd., reinforced concrete engineers and contractors: Barlow and Young, Ltd., lighting.



TRADE NOTES

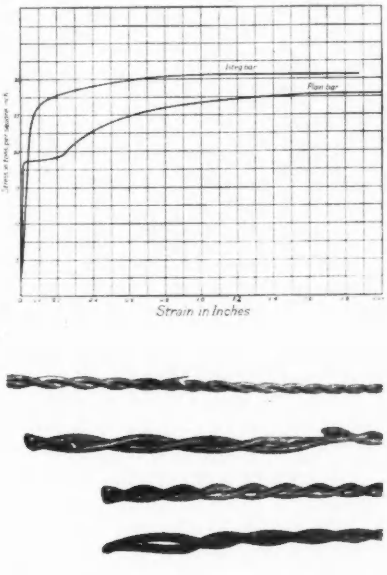
[BY F. R. S. YORKE, A.R.I.B.A.]

Exhibition of Modern Living

THE Exhibition of Modern Living, at Whiteleys, comprises the best organized and most intelligently selected collection of materials and equipment for the modern home I have seen assembled in this country. Architects should visit this exhibition and get to know it by heart; they will not find it boring or difficult, for the sequence of exhibits is logical, there is no overcrowding, and there is no unreasonable repetition. The exhibition resembles in no way the normal architectural or building show where the competitive element is predominant.

●

It is apparent there has been rigid control and that manufacturers have been willing to co-operate with the architect, Serge Chermayeff, who was responsible for the selection and display.



Above: Stress-strain diagram showing the abrupt character of the yield point of mild steel bars in contrast to the regular curve for Isteg steel, gauge length 24 ins. Below: Twisted mild steel rods for concrete reinforcement. Rods are tested individually by the "twisting" process during which faulty rods are broken.

There are some twelve sections, including flooring, wall coverings, lighting, heating, metal fittings (windows, door furniture and standard metal sections, tubes, etc.), furniture, chairs and tables, fabrics, and finally a complete week-end house built and furnished with modern materials.

●

Among the floorings are tiles, travertine, linoleum, jointless composition, straight planks: Tasmanian oak, Australian jarrah, Austrian oak and Indian teak, corkoleum, felt, hair cord, hair pile, cork parquetry, plywood, rubber and terrazzo.

●

The wall coverings include plain, painted and distempered plaster, Keene's plaster on building board, plaster finished with plastic paint, cellulose lacquer, water paint and synthetic resin, cold glaze cement, plain and painted building board, highly compressed building board with natural surface polished, plywood faced with various veneers, with various metals and with Bakelite; glass, synthetic marble and tiles.

●

I understand the exhibition is to be permanent. The walling and flooring materials will no doubt remain as at present, but it is to be hoped that control will be such that any addition to the fittings and furniture sections will be at the discretion of a specialist; already one or two pieces that have crept into the furniture section appear to be there by mistake, since their design does not approach the exceptionally high standard imposed throughout the exhibition.

Concrete Reinforcement

Isteg is a composite steel reinforcement rod, new to Great Britain; it is ordinary mild steel rod, treated by a patent cold twisting and stretching process which is said to impart to the rod qualities that are responsible for the following advantages:—

Considerably greater strength than plain mild steel bar, resulting in a saving of one-third by weight of reinforcement (in tension).

Excellent bond with concrete.

Bars free from scale.

Bars lend themselves readily to bending.

●

It has been found that if two bars of ordinary commercial mild steel are placed

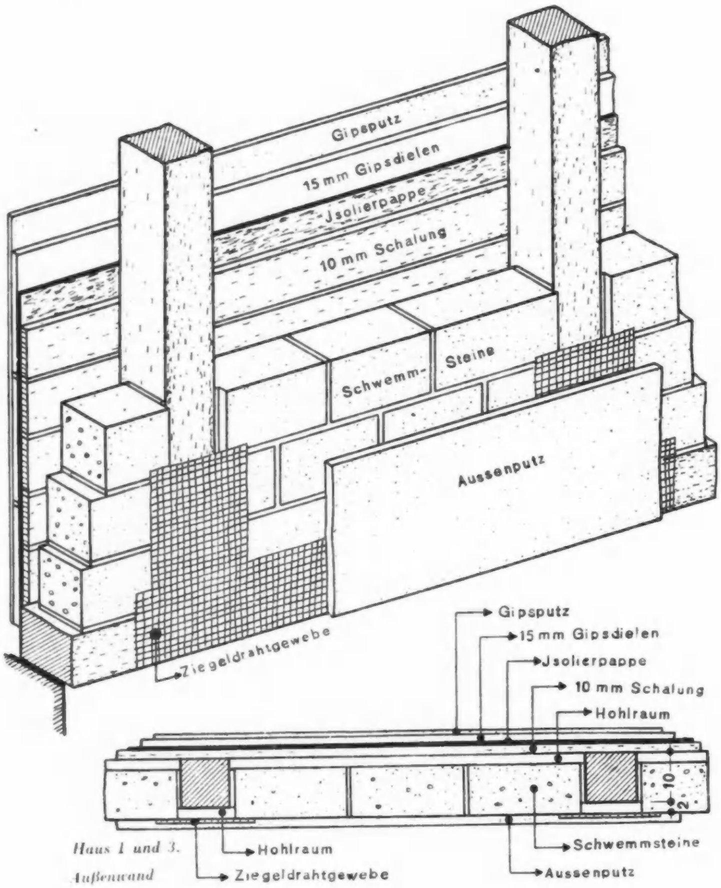

Gipsputz
15 mm Gipsdielen
Jsolierpappe
10 mm Schalung
Schwemm-Steine
Aussenputz
Ziegeldrahtgewebe
Gipsputz
15 mm Gipsdielen
Jsolierpappe
10 mm Schalung
Hohlraum
10
2
Haus 1 und 3.
Außenwand
Hohlraum
Ziegeldrahtgewebe
Schwemmsteine
Aussenputz

Figure 1.

Wooden houses at the "German Timber" Exhibition, Stuttgart, 1933. (1) Wood frame with tufa or similar infilling, covered externally by wire mesh and stucco, and internally by boarding, waterproofed building paper, gypsum board and gypsum plaster. (2) All-wood construction, with wood boards externally, and plywood on internal walls, ceilings and partitions. (3—see page 743) Typical floor sections: wood joists in every case; variations in insulating material and floor and ceiling finish.

side by side and stretched while they are twisted together, the resulting twin bar, whatever the yield points of the individual bars may have been, will have a regular stress-strain diagram free from jerks, giving a yield point (taken at 0.2 per cent. permanent elongation) of a minimum of 55,000 lb./sq. in.

●

Since the average concrete structure will easily stand 0.4 per cent. steel elongation, more than 80 per cent. of the breaking strength of the steel can be used. Failure of concrete reinforced with Isteg steel is not due to a sudden yielding of the steel, but to a gradually increasing discrepancy between the deformation of concrete and reinforcement. Tests on reinforced concrete beams, designed to fail through excessive steel elongation, i.e., with a reinforcement of less than 1 per cent. of the section, have shown breaking stresses of more than 69,000 lb. sq. in.

●

The manufacturers stress the importance of the safety assured by the individual testing of the bars. The steel is thoroughly tested by the stretching and twisting process, each bar being submitted to at least twice the stress it will be called upon to stand in the concrete structure. The twisting has a levelling influence on the strength of the steel, softer parts of the bar being hardened—hence the regular stress-strain diagram. Bars with inherent defects, such as piping, seams, laps, etc., which have not been detected during inspection at the steel works, cannot withstand the twisting process and are immediately rejected (see illustration on page 741).

●

The manufacturers of Isteg steel issue reprints of an article on twisted steel reinforcement that appeared in the October issue of *Concrete*.

Timber Houses

The major part of the space in German architectural publications for November is devoted to photographs and drawings of 25 wooden houses in the Timber Colony at the "German Timber" Exhibition, Stuttgart. Nearly 70 pages (the whole of the issue) in *Moderne Bauformen* contain illustrations and descriptions of these buildings. There are given names and addresses of architects for each of the 25 houses, together with lay-out plan, tables showing ground area for each house, price of house including built-in furniture and fittings, and architects' and clerk of work's fees.

●

There are ten pages of construction details, showing methods employed for walls, roofs and ceilings and special materials for insulation and finishing. Three of these drawings are reproduced here. Only a few of the houses are entirely of wood, the majority having timber frames with brick, stone, or composition infilling. Some are built according to the traditional method with separate uprights to each storey, and others with corner-posts, or all uprights, running through two or three storeys. The all-wood buildings have timber framework with painted boarding on inner and outer face, laid over sheets of insulating material.

●

A tenement, forming part of the scheme, has frame construction with wood uprights extending from ground to roof and standing on concrete foundations. The framework is lined internally with slabs of wood-wool, covered by a 2 cms. coat of plaster; and externally with millboard covered by wood weather boarding, painted grey.

●

Some of the houses have a framework with cellular brick infilling between the vertical studs, covered with wire mesh and plastered with lime plaster. Others have an infilling of natural or re-constructed pumice or tufa blocks, lined internally with plastered wood-wool slabs, and finished with unpainted stucco on the outer face. Ceilings are of painted alder-faced plywood, floors of pine and red beech.

●

The houses cost approximately the same per cu. ft. as normal speculatively-built brick villas; but the quality is considered superior, since high-grade materials are used throughout, special materials are used for insulation, waterproofing, etc., and all the work is carried out under the supervision of architects.

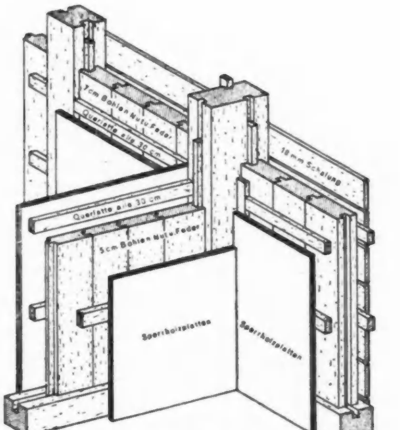

7cm Bohlen Nut u. Feder
Querlatte alle 30 cm
18 mm Schalung
Querlatte alle 30 cm
5cm Bohlen Nut u. Feder
Sperrholzplatten
Sperrholzplatten
Schindelschirm
Jsolierpappe
18 mm Schalung
Hohlraum
12
Sperrholzplatten
Feder 15/35
7cm Bohlen Nut u. Feder
Hohlraum
12/12

Figure 2.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

BERMONDSEY. *Houses, Flats and Shops.* The B.C. has approved the following housing proposals: Seven cottages and 17 flats, Rotherhithe Street area, at a cost of £12,000; 26 flats, Cranborn Place area, at a cost of £12,727, and flats and shops, Neptune Street area, at a cost of £35,969.

CATERHAM. *Houses.* Mr. C. H. Harrington, 115 Waddon Road, Waddon, is to erect 16 houses in Tillington Lane, Caterham.

CROYDON. *Houses, Shops, etc.* Plans passed by the Corporation: Club and two shops, Southbridge Road, for Messrs. C. H. Gibson, Ltd.; 50 houses and 46 flats, Old Town, for Corporation; shop, Selsdon Road, for Mr. W. B. Arrowsmith: office and showrooms, Blunt Road, for Mr. A. Mostyn Scott; two houses, Firsby Avenue, for Messrs. Bleach and Skipper: six houses, Lloyd Park Avenue, for Mr. S. H. Laver; four houses, Northampton Road, and 10 houses, Temple Road, for Mr. B. M. Brown.

ENFIELD. *Factory, Shops and Houses.* Plans passed by the U.D.C.: Shop and workshop, St. Marks Road, Bush Hill Park, for Mr. E. W. Palmer; six houses and shops, Green Street, for The Oatlands Estate, Ltd.: shop, High Street, Ponders End, for Mr. John Smith; two houses, Cedar Park Road, for Mr. E. T. Barnes: factory, off Durants Road, Ponders End, for Mr. H. F. Clark; 36 houses, Graeme Road, for Messrs. Bowyer and Bowyer: workshop, Northfield Road, Ponders End, for Mr. A. H. Tyler.

HAMMERSMITH. *Shops and Flats.* The Middlesex C.C., which has sold the Edmonton Latymer site in Hammersmith Road to Latymer Court, Ltd., and the Hammersmith B.C., have approved plans for the erection of shops and flats, estimated to cost £322,595.

HAMMERSMITH. *Flats.* Mr. M. Rosenauer is to lay out a site at Richford Street and Wells Road, Hammersmith, for the erection of blocks of flats and including two streets.

MIDDLESEX. *Nurses' Home.* The C.C. is to obtain tenders for enlarging the nurses' home at the North Middlesex county hospital, the cost being estimated at £19,260.

TOTTENHAM. *Library.* The U.D.C. has approved a scheme for the erection of a branch library at White Hart Lane, at a cost of £9,500.

SOUTHERN COUNTIES

BEXHILL. *Houses.* Plans passed by the Corporation: 16 houses, Crowmere Avenue, etc., for Mr. J. E. Maynard; five houses, White House Avenue, for Messrs. Tubbs and Messer; two houses, Meads Avenue, for Mr. R. W. Moore; four houses, Kewhurst Avenue, for Mr. Marshall Wood; two houses, Holmesdale Road, for Mr. Cash.

BRIGHTON. *Houses.* The Corporation has agreed to plans of the Estate Co. for the development of the Ladies' Mile estate by the erection of 658 houses.

GUILDFORD. *Houses.* Plans passed by the Corporation: Conversion to two houses into flats, Beckingham Road, for Chapman Building Co.; two houses, Meads Road, for Mr. A. E. Stanley; seven houses, Ardmore estate, for Mr. W. Hoptroff; seven houses, Ash Grove, for Mr. H. Ashenden; four houses, Manor Way, for Onslow Village, Ltd.; lay-out and new road, extension of Ash Grove, for Mr. G. C. Clark.

HARDLEY. *School.* The Hampshire Education Committee is to erect an elementary school at Hardley, at a cost of £9,710.

NEWBURY. *Hospital.* The Corporation has approved a scheme for the erection of a new block to accommodate 100 patients, together with additional accommodation for extra staff, at Berkshire mental hospital, at a total estimated cost of £21,687, of which the Corporation's share will be £1,350.

PORTSMOUTH. *Houses, Flats and Shops.* Plans passed by the Corporation: Block of flats, Campbell Road and Lorne Road, for Capt. G. E. Couzens; four houses, Waverley Road, for Mr. W. G. Keeping: nine houses, Bernard Avenue, for Messrs. Brown and Fuller; three shops, London Road, for Messrs. E. and A. Sprigings: 23 houses, Hawthorn Crescent, for Messrs. G. and W. Mitchell: seven houses, Park Grove, Cosham, for Messrs. Dye Bros.; ten houses, Stride Avenue, for Portsmouth Modern Houses, Ltd.

MIDLAND COUNTIES

STOKE-ON-TRENT. *Houses.* Messrs. J. W. Thornley and Sons are to erect 90 houses on the Woodlands estate, Trent Vale, Stoke-on-Trent.

STOKE-ON-TRENT. *Houses.* The Corporation has arranged with the architect of the Highfield Farm Estate, Wolstanton, for the provision of electricity supply to 600 houses to be erected.

STOKE-ON-TRENT. *Houses and Shops.* Plans passed: Two houses, Levita Road, Oakhill, for Messrs. P. Bailey & Co.; two houses, Abbey Lane, Abbey Hulton, for Mr. W. Withington: house and shop, Abbots Road, Abbey Hulton, for Mr. H. Twigg; four houses, Albany Road, Harpfields, for Mrs. Pearson; two houses, Longton Lane, Blurton, for Messrs. Watkin, Malpass and Witham: 26 houses (amended plan), Portland Street, for Messrs. Salt and Clowes; shopping centre, Stafford Street area, Hanley, for Mr. C. McIlroy: two houses, Longton Road, Bucknall, for Mr. A. Perry: seven houses, off Aynsley Road, Shelton, for Mr. J. Dimbleby; two houses, Harding Terrace, for Mr. E. Johnson; four houses, Hartshill Road, for Mr. E. Jones; two bungalows, Longton Lane, Longton, for Messrs. Watkin, Malpass and Witham.

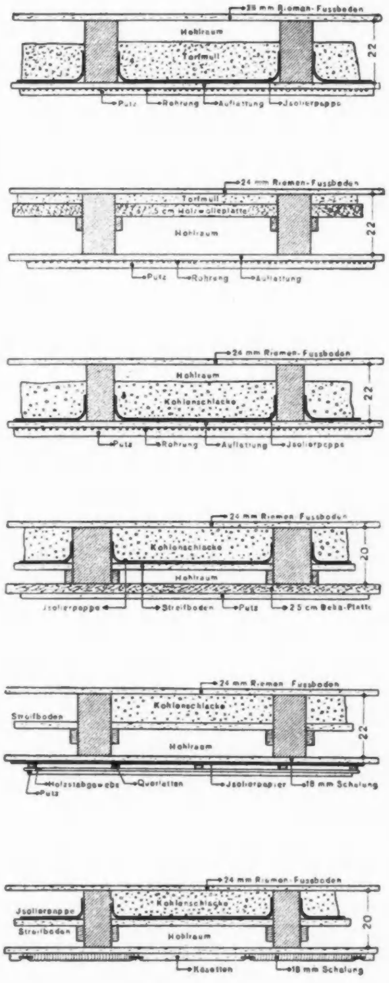


Figure 3.

Wooden Floor Construction (see caption on p. 742.)

NORTHERN COUNTIES

CHORLEY. *Shops and Houses.* Plans passed by the Corporation: House and shop, Pilling Lane, for Mr. L. Littlewood; 28 houses, Isleworth Drive, etc., for Gillibrand Estates, Ltd.

LANCASHIRE. *Schools.* The Education Committee is seeking sanction for a loan of £21,300, for the erection of an elementary school at Huyton, and is to enlarge the Bailey senior school, Fleetwood, at a cost of £4,520.

The Education Committee is to enlarge the Grammar School at Newton-in-Makerfield at a cost of £5,000.

The Education Committee is seeking sanction to borrow £7,729 for extensions at the Chadderton Grammar School.

The Education Committee has purchased land at Darwen for the erection of a secondary school.

SHIPLEY. *Houses.* Plans passed by the U.D.C.: Two houses, Moorhead Crescent, for Mr. C. Houlden: houses, Wrose Mount, for Messrs. Walton Bros.: ten houses, Nab Wood Road, for Messrs. William Pitts and Sons; four houses, Poplar Crescent, for Messrs. Dale and Wild.

SHEFFIELD. *Museum.* The Corporation is to reconstruct and enlarge the City Museum, at a cost of £16,000.

SOUTH SHIELDS. *Schools.* The Education Committee has instructed Mr. G. R. Smith to proceed with the preparation of preliminary plans for the new high school for boys, for submission to the Education Committee, and thereafter to the Board of Education for approval.

The Education Committee has instructed the superintendent of repairs to prepare plans for alterations to the latrines at the Westoe secondary and Westoe central schools.

The Education Committee has appointed Mr. H. Hill as architect for the erection of the domestic subjects centre and gymnasium at the Westoe secondary school.

TYNEMOUTH. *Houses.* Plans passed by the Corporation: Four houses, Preston Colliery estate, for Messrs. Cackett, Burns, Dick and Mackellar: four houses, Willoughby Road, for Mr. F. R. N. Haswell; shop, Preston North Road, for Mr. J. R. Wallace; lay-out, North Road estate, Preston, for Mr. C. P. Sherwin, on behalf of the North Road Syndicate; lay-out, West Chirton estate (amended plan), for Messrs. Marshall and Tweedy; 13 houses, Seacrest Avenue, for Messrs. A. and E. Brannen; six houses, Heaton Terrace, for Mr. H. P. Woodall; four houses, Fern Avenue, for Messrs. J. W. and D. Brannen; four houses, Mowbray Road, for Mr. S. Pye; lay-out (amended plan), Roxby Gardens, for Mr. W. Moore.

Manufacturers' Items

Messrs. Dorman Long & Co., Ltd.'s contract for the new Spillers Flour Mill at Avonmouth stipulated that the steelwork had to be in position in eight weeks. This included the survey of the site, the preparation of the working details, the manufacture of the steel and rolling of the materials at the mills, the fabrication in the shops, the delivery and unloading at the site and the actual erection of the steel members.

This work was accomplished by the firm, who took 4½ weeks from the receipt of the order to effect the first delivery at the site, and 3½ weeks to erect the entire 1,500 ton steel framework. The consulting engineer was Dr. Oscar Faber, O.B.E., D.SC., M.INST.C.E.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A₁	Aberdare ..	S. Wales & M.	1 5	1 0¾
A₁	Abergavenny ..	S. Wales & M.	1 5	1 0¾
A₃	Abingdon ..	S. Counties	1 4	1 0
A	Accrington ..	N.W. Counties	1 5½	1 1¼
A₃	Addlestone ..	S. Counties	1 4	1 0
A	Adlington ..	N.W. Counties	1 5½	1 1¼
A	Airdrie ..	Scotland	*1 5½	1 1¼
C	Aldeburgh ..	E. Counties	1 1½	10¼
A	Altrincham ..	N.W. Counties	1 5½	1 1¼
B₃	Appleby ..	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A₃	Atherstone ..	Mid. Counties	1 4	1 0
B₂	Aylesbury ..	S. Counties	1 2½	11
B₁	Banbury ..	S. Counties	1 3	11¼
B₁	Bangor ..	N.W. Counties	1 3	11¼
A₃	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley ..	Yorkshire	1 5½	1 1¼
B	Barnstaple ..	S.W. Counties	1 3½	11¾
A	Barrow ..	N.W. Counties	1 5½	1 1¼
A	Barry ..	S. Wales & M.	1 5½	1 1¼
B₁	Basingstoke ..	S.W. Counties	1 3	11¼
A₃	Bath	S.W. Counties	1 4	1 0
A	Batley ..	Yorkshire	1 5½	1 1¼
A₃	Bedford ..	E. Counties	1 4	1 0
A₂	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A₂	Bewdley ..	Mid Counties	1 4½	1 0½
B₃	Bicester ..	S. Counties	1 2	10½
	Birkenhead ..	N.W. Counties	*1 7	1 2¼
A	Birmingham ..	Mid. Counties	1 5½	1 1¼
A₁	Bishop Auckland	N E. Coast	1 5	1 0¾
A	Blackburn ..	N.W. Counties	1 5½	1 1¼
A	Blackpool ..	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B₂	Bognor ..	S. Counties	1 2½	11
A	Bolton ..	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A	Bournemouth ..	S Counties	1 4	1 0
B₂	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford ..	Yorkshire	1 5½	1 1¼
A₁	Brentwood ..	E. Counties	1 5	1 0¾
A	Bridgend ..	S. Wales & M.	1 5½	1 1¼
B₁	Bridgwater ..	S.W. Counties	1 3	11¼
A₁	Bridlington ..	Yorkshire	1 5	1 0¾
A	Brighouse ..	Yorkshire	1 5½	1 1¼
A₃	Brighton ..	S. Counties	1 4	1 0
A	Bristol ..	S.W. Counties	1 5½	1 1¼
B₃	Brixham ..	S.W. Counties	1 2	10½
A₂	Bromsgrove ..	Mid. Counties	1 4½	1 0½
C	Bromyard ..	Mid. Counties	1 1½	10¼
A	Burnley ..	N.W. Counties	1 5½	1 1¼
A	Burslem ..	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A₁	Buxton ..	N.W. Counties	1 5	1 0¾
A₂	Cambridge ..	E. Counties	1 4½	1 0½
B₂	Canterbury ..	S. Counties	1 2½	11
A	Cardiff ..	S. Wales & M.	1 5½	1 1¼
A	Carlisle ..	N.W. Counties	1 5½	1 1¼
B	Carmarthen ..	S. Wales & M.	1 3½	11¾
B	Carnarvon ..	N.W. Counties	1 3½	11¾
A	Carnforth ..	N.W. Counties	1 5½	1 1¼
A	Castleford ..	Yorkshire	1 5½	1 1¼
B	Chatham ..	S. Counties	1 3½	11¾
B	Chelmsford ..	E. Counties	1 3½	11¾
A₃	Cheltenham ..	S.W. Counties	1 4	1 0
A	Chester ..	N.W. Counties	1 5½	1 1¼
A	Chesterfield ..	Mid. Counties	1 5½	1 1¼
B₂	Chichester ..	S Counties	1 2½	11
A	Chorley ..	N.W. Counties	1 5½	1 1¼
B₂	Cirencester ..	S. Counties	1 2½	11
A	Clitheroe ..	N.W. Counties	1 5½	1 1¼
A	Clydebank ..	Scotland	1 5½	1 1¼
A	Coalville ..	Mid. Counties	1 5½	1 1¼
A₃	Colchester ..	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A₂	Colwyn Bay	N.W. Counties	1 4½	1 0½
A₁	Consett ..	N.E. Coast	1 5	1 0¾
A₂	Conway ..	N.W. Counties	1 4½	1 0½
A	Coventry ..	Mid. Counties	1 5½	1 1¼
A₂	Crewe ..	N.W. Counties	1 4½	1 0½
A₃	Cumberland ..	N.W. Counties	1 4	1 0
A	Darlington	N.E. Coast	1 5½	1 1¼
A	Darwen ..	N.W. Counties	1 5½	1 1¼
B₂	Deal	S. Counties	1 2½	11
A₃	Denbigh ..	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury ..	Yorkshire	1 5½	1 1¼
B	Didcot ..	S. Counties	1 3½	11¾
A	Doncaster ..	Yorkshire	1 5½	1 1¼
B₂	Dorchester ..	S.W. Counties	1 2½	11
A₃	Driffield ..	Yorkshire	1 4	1 0
A₂	Droitwich ..	Mid. Counties	1 4½	1 0½
A	Dudley ..	Mid. Counties	1 5½	1 1¼
A	Dundee ..	Scotland	1 5½	1 1¼
A	Durham ..	N.E. Coast	1 5½	1 1¼

			I	II
			s. d.	s. d.
A₃	Eastbourne	S. Counties	1 4	1 0
A₁	Ebbw Vale ..	S. Wales & M.	1 5	1 0¾
A	Edinburgh ..	Scotland	1 5½	1 1¼
A₁	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A₂	Exeter ..	S.W. Counties	*1 4½	1 0½
B₁	Exmouth ..	S.W. Counties	1 3	11¼
A₃	Felixstowe	E. Counties	1 4	1 0
A₃	Filey	Yorkshire	1 4	1 0
A	Fleetwood ..	N.W. Counties	1 5½	1 1¼
B₂	Folkestone ..	S. Counties	1 2½	11
A	Frodsham ..	N.W. Counties	1 5½	1 1¼
B₂	Frome ..	S.W. Counties	1 2½	11
A	Gateshead	N.E. Coast	1 5½	1 1¼
B	Gillingham ..	S. Counties	1 3½	11¾
A₂	Gloucester ..	S.W Counties	1 4½	1 0½
A₂	Goole	Yorkshire	1 4½	1 0½
A₃	Gosport ..	S. Counties	1 4	1 0
A₃	Grantham ..	Mid. Counties	1 4	1 0
A₁	Gravesend ..	S. Counties	1 5	1 0¾
A	Greenock ..	Scotland	*1 5½	1 1¼
A	Grimsby ..	Yorkshire	1 5½	1 1¼
B₁	Guildford ..	S. Counties	1 3	11¼
A	Halifax ..	Yorkshire	1 5½	1 1¼
A	Hanley ..	Mid. Counties	1 5½	1 1¼
A	Harrogate ..	Yorkshire	1 5½	1 1¼
A	Hartlepools ..	N.E. Coast	1 5½	1 1¼
B	Harwich ..	E. Counties	1 3½	11¾
B₂	Hastings ..	S. Counties	1 2½	11
A₃	Hatfield ..	S. Counties	1 4	1 0
B	Hereford ..	S.W. Counties	1 3½	11¾
A₃	Hertford ..	E. Counties	1 4	1 0
A	Heysham ..	N.W. Counties	1 5½	1 1¼
A	Howden ..	N.E. Coast	1 5½	1 1¼
A	Huddersfield ..	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	Ilkley ..	Yorkshire	1 5½	1 1¼
A	Immingham ..	Mid. Counties	1 5½	1 1¼
A₃	Ipswich ..	E. Counties	1 4	1 0
B₃	Isle of Wight ..	S. Counties	1 2	10½
A	Jarrow ..	N.E. Coast	1 5½	1 1¼
A	Keighley ..	Yorkshire	1 5½	1 1¼
B	Kendal ..	N.W. Counties	1 3½	11¾
B	Keswick ..	N.W. Counties	1 3½	11¾
A	Kettering ..	Mid. Counties	1 4½	1 0½
A₂	Kidderminster	Mid. Counties	1 4½	1 0½
B₂	King's Lynn ..	E. Counties	1 2½	11
A	Lancaster ..	N.W. Counties	1 5½	1 1¼
A₁	Leamington ..	Mid. Counties	1 5	1 0¾
A	Leeds ..	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester ..	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B₃	Lewes	S. Counties	1 2	10½
A₂	Lichfield ..	Mid. Counties	1 4½	1 0½
A	Lincoln ..	Mid. Counties	1 5½	1 1¼
	Liverpool ..	N.W. Counties	*1 7	1 2¼
A₂	Llandudno ..	N.W. Counties	1 4½	1 0½
A	Llanelly ..	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton ..	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A₃	Luton ..	E. Counties	1 4	1 0
A	Lytham .	N.W. Counties	1 5½	1 1¼
A₁	Macclesfield	N.W Counties	1 5	1 0¾
B	Maidstone ..	S. Counties	1 3½	11¾
A₃	Malvern ..	Mid. Counties	1 4	1 0
A	Manchester ..	N.W. Counties	1 5½	1 1¼
A	Mansfield ..	Mid. Counties	1 5½	1 1¼
B₁	Margate ..	S. Counties	1 3	11¼
A₃	Matlock ..	Mid. Counties	1 4	1 0
A₁	Merthyr ..	S. Wales & M.	1	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A₂	Middlewich ..	N.W. Counties	1 4½	1 0½
B₂	Minehead ..	S.W. Counties	1 2½	11
B₂	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe ..	N.W. Counties	1 5½	1 1¼
A₂	Nantwich ..	N.W. Counties	1 4½	1 0½
A	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson ..	N.W. Counties	1 5½	1 1¼
A	Newcastle ..	N.E. Coast	1 5½	1 1¼
A	Newport ..	S. Wales & M.	1 5½	1 1¼
A	Normanton ..	Yorkshire	1 5½	1 1¼

			I	II
			s. d.	s. d.
A₁	Northampton ..	Mid. Counties	1 5	1 0¾
A	North Staffs. ..	Mid. Counties	1 5½	1 1¼
A	North Shields ..	N.E. Coast	1 5½	1 1¼
A₂	Norwich ..	E. Counties	1 4½	1 0½
A	Nottingham ..	Mid. Counties	1 5½	1 1¼
A	Nuneaton ..	Mid. Counties	1 5½	1 1¼
A₃	Oakham ..	Mid. Counties	1 4	1 0
A	Oldham ..	N.W. Counties	1 5½	1 1¼
A₃	Oswestry ..	N.W. Counties	1 4	1 0
A₂	Oxford ..	S. Counties	1 4½	1 0½
A	Paisley ..	Scotland	*1 5½	1 1¼
B₃	Pembroke ..	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A₂	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth ..	S.W. Counties	*1 5½	1 1¼
A	Pontefract ..	Yorkshire	1 5½	1 1¼
A₁	Pontypridd ..	S. Wales & M.	1 5	1 0¾
A₃	Portsmouth ..	S. Counties	1 4	1 0
A	Preston ..	N.W. Counties	1 5½	1 1¼
A	Queensferry	N.W. Counties	1 5½	1 1¼
A₂	Reading ..	S. Counties	1 4½	1 0½
B	Reigate ..	S. Counties	1 3½	11¾
A₃	Retford ..	Mid Counties	1 4	1 0
A₁	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A₃	Ripon	Yorkshire	1 4	1 0
A	Rochdale ..	N.W. Counties	1 5½	1 1¼
B	Rochester ..	S. Counties	1 3½	11¾
A₁	Ruabon ..	N.W. Counties	1 5	1 0¾
A	Rugby ..	Mid. Counties	1 5½	1 1¼
A₃	Rugeley ..	Mid. Counties	1 4	1 0
A	Runcorn ..	N.W. Counties	1 5½	1 1¼
A₂	St. Albans ..	E. Counties	1 4½	1 0½
A	St. Helens ..	N.W. Counties	1 5½	1 1¼
B₃	Salisbury ..	S.W. Counties	1 2	10½
A₁	Scarborough ..	Yorkshire	1 5	1 0¾
A	Scunthorpe ..	Mid. Counties	1 5½	1 1¼
A	Sheffield ..	Yorkshire	1 5½	1 1¼
A	Shipley ..	Yorkshire	1 5½	1 1¼
A₂	Shrewsbury ..	Mid. Counties	1 4½	1 0½
A₂	Skipton ..	Yorkshire	1 4½	1 0½
A₃	Slough ..	S. Counties	1 4	1 0
A₂	Solihull ..	Mid. Counties	1 4½	1 0½
A₂	Southampton	S. Counties	1 4½	1 0½
A₂	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport ..	N.W. Counties	1 5½	1 1¼
A	S. Shields ..	N.E. Coast	1 5½	1 1¼
A₂	Stafford ..	Mid. Counties	1 4½	1 0½
A	Stockport ..	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud ..	S.W. Counties	1 3½	11¾
A	Sunderland ..	N.E. Coast	1 5½	1 1¼
A	Swadlincote ..	Mid. Counties	1 5½	1 1¼
A	Swansea ..	S. Wales & M.	1 5½	1 1¼
A₃	Swindon ..	S.W. Counties	1 4	1 0
A₁	Tamworth ..	N.W. Counties	1 5	1 0¾
B	Taunton ..	S.W. Counties	1 3½	11¾
A	Teesside Dist. ..	N.E. Counties	1 5½	1 1¼
A₃	Teignmouth ..	S.W. Coast	1 4	1 0
A	Todmorden ..	Yorkshire	1 5½	1 1¼
A₁	Torquay ..	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall ..	Mid. Counties	1 5½	1¼
A	Tyne District ..	N. E. Coast	1 5½	1¼
A	Wakefield	Yorkshire	1 5½	1 1¼
A	Walsall ..	Mid. Counties	1 5½	1 1¼
A	Warrington ..	N.W. Counties	1 5½	1 1¼
A₁	Warwick ..	Mid. Counties	1 5	1 0¾
A₂	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A₂	Weston-s.-Mare	W. Counties	1 4½	1 0½
A₂	Whitby ..	Yorkshire	1 4½	1 0½
A	Widnes ..	N.W. Counties	1 5½	1 1¼
A	Wigan ..	N.W. Counties	1 5½	1 1¼
B₁	Winchester ..	S. Counties	1 3	11¼
A₃	Windsor ..	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A₂	Worcester ..	Mid. Counties	1 4½	1 0½
A₃	Worksop ..	Yorkshire	4	1 0
A₁	Wrexham ..	N.W. Counties	5	1 0¾
A₃	Wycombe ..	S. Counties	4	1 0
B₁	Yarmouth ..	E. Counties	1 3	11¼
B₁	Yeovil ..	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
White Portland Cement	,,	8	15	0
Thames Ballast	per Y.C.		6	3
¾" Crushed Ballast	,,		6	9
Building Sand	,,		7	3
Washed Sand	,,		8	3
2" Broken Brick	,,		8	0
¾" ,, ,,	,,		10	3
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	8	17	6
,, Wirecuts	,,	7	17	6
,, Brindles	,,	7	0	0
,, Bullnose	,,	9	0	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	7	10	0
Luton Facings	,,	7	10	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	0	0
Headers	,,	20	10	0
Bullnose	,,	27	10	0
Double Stretchers	,,	29	10	0
Double Headers	,,	26	10	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	4½
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	28	17	6
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		18	6
,, ⅞"	,,	1	1	6
,, 1"	,,	1	2	0
,, 1¼"	,,	1	5	0
,, 1½"	,,	1	10	0
Deal matchings ⅝"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1½"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ⅜"	,,	8	6
,, ,, ½"	,,	8	3
,, ,, ⅝"	,,	8	0
,, ,, ¾"	,,	7	6
,, ,, ⅞"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		8		10
Shoes	each	2	0	3	0
Anti-splash shoes	,,	4	6	8	0
Boots	,,	3	0	4	0
Bends	,,	2	7	3	9
,, with access door	,,	—		6	3
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	3	9	6	0
Plinth bends, 4½" to 6"	,,	3	9	5	3
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		6
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	0	6
,, drawn pipes	,,		17	6
,, soil pipe	,,	1	0	6
,, scrap	,,		11	0
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			8½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.					2⅞
,, ,, 26 oz. ,, ,, ,,	,,					3¼
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
¼" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3¼
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	2	6	0
,, ordinary	,,	2	0	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
„ to reduce levels n/e 5′ 0" deep and cart away	Y.C.		8	6
„ to form basement n/e 5′ 0" deep and cart away	„		9	0
„ „ 10′ 0" deep and cart away	„		9	6
„ „ 15′ 0" deep and cart away	„		10	0
If in stiff clay add	„		2	6
If in underpinning „	„		4	0
Planking and strutting to sides of excavation	F.S.		1	0
„ „ to pier holes	„			5
„ „ to trenches	„			5
„ „ extra, only if left in	„			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	„	1	6	0
„ „ (4-2-1)	„	1	12	6
„ „ underpinning	„	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and grating	„	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	27	10	0
„ „ in cement	„	28	15	0
„ Stocks in cement	„	35	0	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			8½
„ „ „ red brick facings and pointing	„			11
„ „ blue brick facings and pointing	„		1	4
„ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
½" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	„	6	9
¾" paving or flat	„	4	0
1" paving or flat	„	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

			s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	„	3	7	0
Do., 24" × 12"	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles.	„	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	„	4	6	6
„ „ „ „ „ „ (green)	„	4	15	0

CARPENTER AND JOINER

		£	s.	d
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" „ „ „ „	„	1	17	6
1¼" „ „ „ „	„	2	3	0
¾" × 2" fir battening for Countess slating	„		9	6
Do. for 4" gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1½" „ „ „ „ „	„		1	6
2" deal wrought rounded roll	F.R.			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼" do.	„	2	10	0
1½" do.	„	2	17	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1¼" do.	„		1	9

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	9½
2" „ „ „	„	1	11½
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	3	7
2" „ „ „	„	3	10
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" „ „ „	„	2	8
1½" „ but moulded both sides	„	2	4
2" „ „ „	„	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	0
4½" × 3½" „ „	„	1	4
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½" deal moulded wall strings	„	2	1
1½" „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" „ „	„	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	0
Do. in flashings		1	17	6
Do. in covering to turrets, etc.	„	2	3	6
Do. in soakers	„	1	9	6
Labour to welted edge	F.R.			3½
Open copper nailing	„			3½
Close „ „	„			4½

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	„	6½	8	9	11	1	—
Boiler screws and unions	„	3 3	3 9	5 0	8 0	—	—
Lead traps	„	—	—	—	6 3	8 9	—
Screw down bib valves	„	6 9	9 6	11 0	—	—	—
Do. stop cocks	„	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	1	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

			s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	8
Do. vertical	„		2	1
Rough render on walls	„		1	3
Render, float and set in lime and hair	„		1	11
Render and set in Sirapite	„		2	1
Render, backing in cement and sand, and set in Keene's cement	„		2	10
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R.			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1" girth	„			1½
1" granolithic pavings	Y.S.		3	6
1½" „	„		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	„		17	6
9" × 3" „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper from	„	2	9

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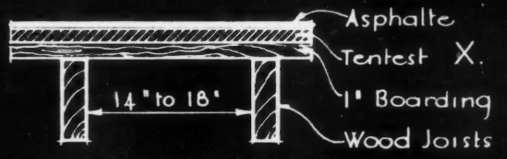
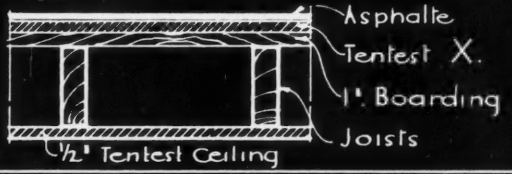
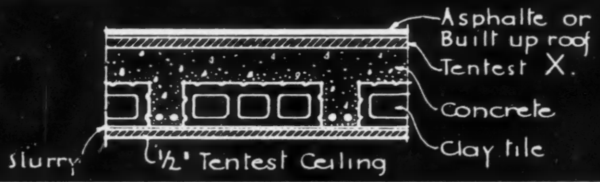
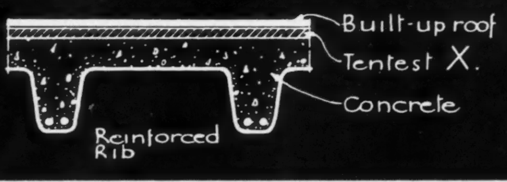
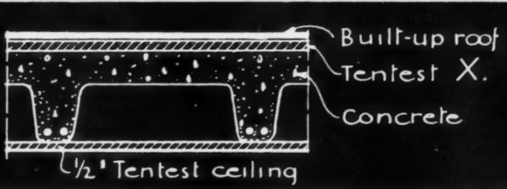
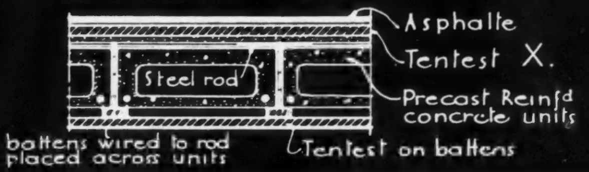
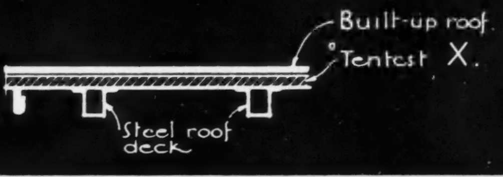
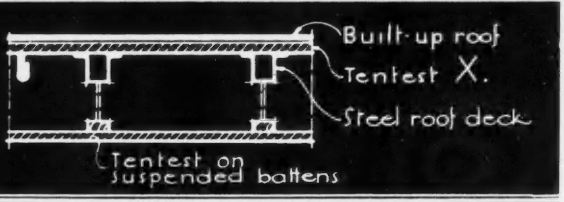
NOTE: The fuel savings are based on a heating period of 210 days with a difference between inside & outside temperatures of 35° F.

Information from The Tentest Fibre Board Co(1929)Ltd

THICKNESS OF TENTEST IN INCHES. AT X.	COEFFICIENT OF TRANSMISSION IN B.T.U's PER HOUR PER °F. PER SQ. FT.	ANNUAL COAL FUEL SAVING IN TONS/1000 SQ. FT. OF INSULATION.	DETAILS OF ROOF CONSTRUCTION USING TENTEST INSULATING BOARD
None	0·485	—	①  Asphalte Tentest X. 1" Boarding Wood Joists 14" to 18"
½	0·280	3·47	
5/8	0·253	3·92	
¾	0·216	4·55	
1	0·196	4·88	
Ceiling only	0·219	—	②  Asphalte Tentest X. 1" Boarding Joists ½" Tentest Ceiling
½	0·164	0·93	
5/8	0·155	1·08	
¾	0·146	1·23	
1	0·131	1·49	
Ceiling only	0·197	—	③  Asphalte or Built up roof Tentest X. Concrete Clay tile Slurry ½" Tentest Ceiling
½	0·152	0·76	
5/8	0·144	0·90	
¾	0·136	1·03	
1	0·124	1·23	
None	0·568	—	④  Built-up roof Tentest X. Concrete Reinforced Rib
½	0·306	4·42	
5/8	0·274	4·95	
¾	0·248	5·42	
1	0·209	6·06	
Ceiling only	0·233	—	⑤  Built-up roof Tentest X. Concrete ½" Tentest ceiling
½	0·172	1·03	
5/8	0·162	1·20	
¾	0·153	1·35	
1	0·137	1·62	
Ceiling only	0·243	—	⑥  Asphalte Tentest X. Steel rod Precast Reinfd concrete units battens wired to rod placed across units Tentest on battens
½	0·178	1·10	
5/8	0·167	1·28	
¾	0·157	1·45	
1	0·141	1·72	
None	0·781	—	⑦  Built-up roof. Tentest X. Steel roof deck
½	0·358	7·20	
5/8	0·315	7·90	
¾	0·282	8·42	
1	0·232	9·29	
Ceiling only	0·262	—	⑧  Built-up roof Tentest X. Steel roof deck Tentest on suspended battens
½	0·188	1·25	
5/8	0·177	1·44	
¾	0·166	1·62	
1	0·146	1·96	

INFORMATION SHEET: DETAILS OF TENTEST INSULATING BOARD.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

Supplement to THE ARCHITECTS' JOURNAL for December 7, 1933

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INFORMATION SHEET

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WALLBOARD

Name of Product:	TenTest Fibre Board
Type Illustrated:	Roof Insulation

Description:

Researches by recognised authorities relative to the heat expansion of concrete roofs covered with asphalt or other bituminous materials, prove that such finishes absorb and transmit a high proportion of the heat from the sun's rays—usually about 90% of the incident heat. Even heavy gritting of the outer surface, a finish often applied on asphalt roofs and frequently on felt roofs, does not in general reduce the transmitted heat below 80%. Troubles due to expansion may, therefore, be expected with concrete roofs of large area unless precautions are taken to reduce the temperature rise within them. TenTest is an insulating board and is interposed between the surfacing and the concrete.

Specification for the application of Asphalt and TenTest to roof decks.

General:

It is essential that the TenTest should be laid by the asphalting firm in order to ensure that the recommendations which follow are rigidly adhered to.

Throughout the whole of the operations every precaution should be taken to ensure perfect dryness and freedom from dust or dirt. Work should be suspended during wet or unfavourable weather and arrangements made to protect work partly executed, especially the edges of the TenTest sheets, which should be carefully sealed with mastic.

Concrete Roof Decks:

Concrete roofs to be treated should be screeded or floated to true surfaces and falls.

Before applying the TenTest the concrete should be thoroughly dry, clean and free from dust or debris. The TenTest sheets should be 2′×4′, or 2′×5′ in dimensions. They should be perfectly dry, brushed free of any loose dust, thoroughly mopped with hot bituminous mastic, and then laid in position. The mastic should be composed of:—

Pure Bitumen—99% soluble carbon-bisulphide and having a penetration of 40/50° @ 77° F.	40%
Fine Limestone Flour showing not less than 80% passing the 200 mesh sieve ..	60%
	100%

It should be heated to between 375° and 425° F, kept well stirred and applied hot.

Laying TenTest:

Should doubt exist as to an absolutely dry condition of the concrete, it is recommended that over the concrete should first be laid a stout, good quality waterproof building paper, having a 2″ lap at all joints. These joints should be thoroughly mopped with mastic. The top surface of the building paper should then be well and evenly mopped with mastic and the TenTest sheet immediately pressed into position before the mastic is set. The TenTest sheets may be brought into moderate contact, but must, on no account, be forced into position. The total area of Paper and TenTest laid in one operation should not exceed that capable of being asphalted immediately.

Timber Roof Decks:

TenTest should be fixed to timber roof decks by means of galvanized Slater's nails, in the usual manner.

Asphalt Surface Finish:

The asphalt should be composed of high grade naturally impregnated Asphaltic Rock containing not less than 8% of inherent bitumen, and should be fluxed with Refined Trinidad Lake Bitumen.

Name of Manufacturers	TenTest Fibre Board Co. (1929), Limited
Address	Astor House, Aldwych, London, W.C.2
Telephone	Holborn 8018

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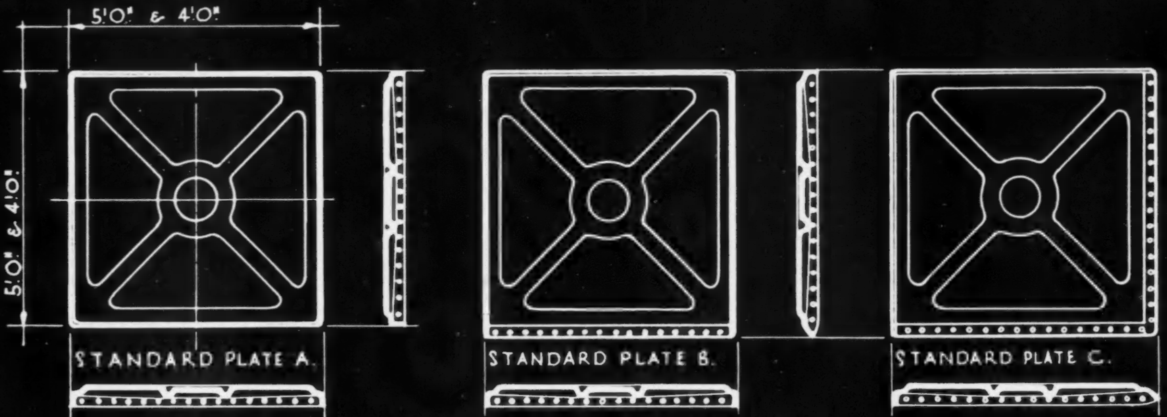
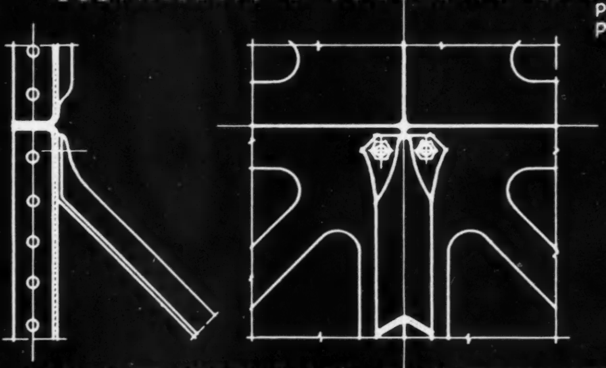
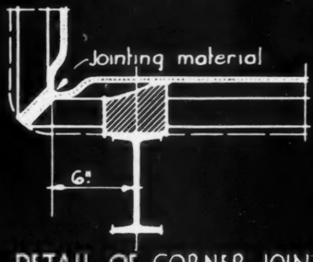


ELEVATIONS & SECTIONS OF STANDARD PLATES.

Plates in two sizes.. 4'0" & 5'0" square.
Plates jig drilled to ensure interchangeability.



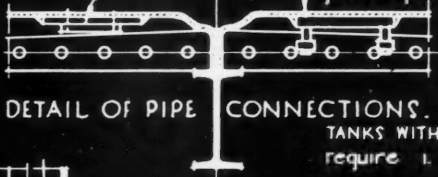
DETAIL OF PRESSED STEEL STAY CONNECTION
Patent Nº 267234.



DETAIL OF CORNER JOINT.

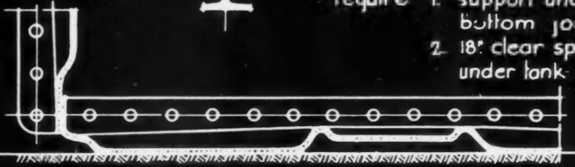
JOINTING MATERIALS:
"Atlas Plastic" compound is the standard jointing material for temperatures up to 120° F.
Other materials:
Impregnated wood strip, or/ Lead strip.

Pipe connections provided for by screwed flanges or/ faced pads welded on



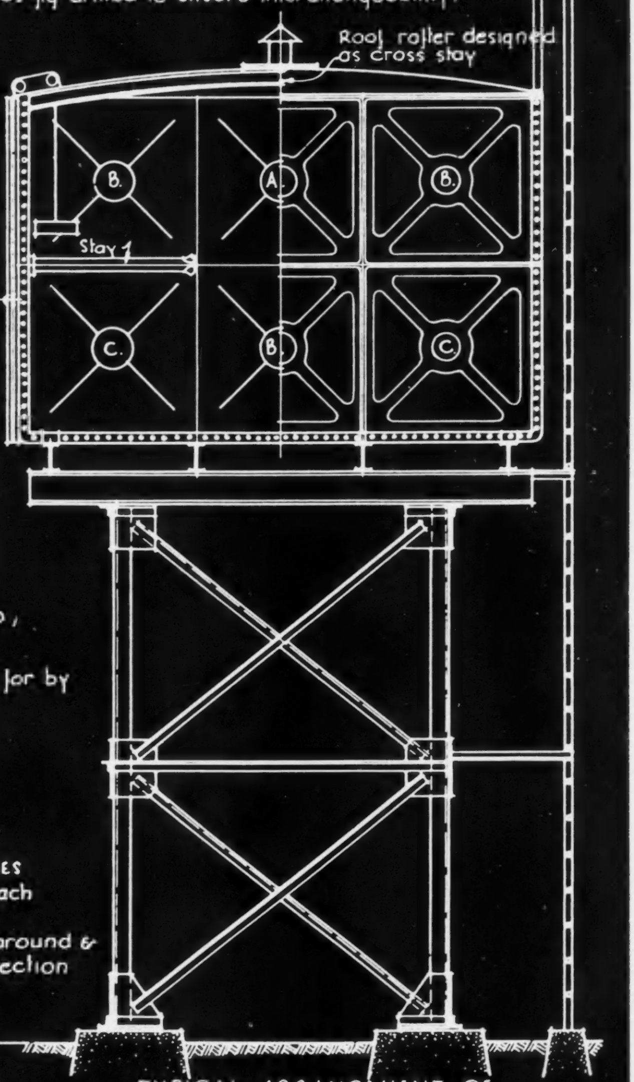
DETAIL OF PIPE CONNECTIONS.

TANKS WITH EXTERNAL FLANGES require
1. support under each bottom joint.
2. 18" clear space around & under tank for erection



DETAIL OF INTERNAL FLANGED BOTTOM PLATES.

NOTE: Tanks with external flanges are recommended except where headroom is limited, or where it is desirable to erect direct on to a flat roof or floor.



TYPICAL ARRANGEMENT OF AN ELEVATED TANK
Showing: level indicator, manhole & ventilator, access ladder, grillage, internal stays.

Information from the Horseley Bridge & Engineering Co. Ltd.

INFORMATION SHEET: PIGGOTTS PRESSED STEEL TANKS.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

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INFORMATION SHEET

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TANKS

Name of Product : Piggott's Pressed Steel Tanks

Description : These Tanks are supplied in standard 4 ft. and 5 ft. sections, with all Stays, Bolts, Nuts and Jointing Material.

Name of Manufacturers : Horseley Bridge & Engineering Co., Ltd.
incorporating
Thomas Piggott & Co., Ltd.

Address Horseley Works, Tipton, Staffs.
Telephone 1107 & 1108 Tipton
London Office 22 Carlisle Place, London, S.W.1.
Telephone Victoria 3836 & 3837

CAPACITIES, SIZES AND WEIGHTS OF TANKS

4 ft. 0 in. SQUARE PLATES

Nom. Capa'ty in Galls.	Length.	Width.	Depth.	No. of Plates.	Approximate Total Weights.											
					3/16" Plates.				1/4" Plates.				5/16" Plates.			
	ft.	ft.	ft.		T.	C.	Q.	Lb.	T.	C.	Q.	Lb.	T.	C.	Q.	Lb.
800	8	4	4	8		19	1	26		15	3	4		10	3	26
1,200	12	4	4	11	1	7	0	10	1	2	0	0		15	1	17
1,600	16	4	4	14	1	14	1	8	1	7	3	11		19	1	22
1,600	8	8	4	12	1	9	3	26	1	4	1	11		17	0	16
2,400	12	8	4	16	2	0	0	3	1	12	2	15	1	3	0	3
3,200	8	8	8	20	2	9	3	0	2	0	2	6	1	8	3	0
3,200	16	8	4	20	2	9	3	18	2	0	2	24	1	8	3	18
3,600	12	12	4	21	2	12	3	17	2	2	3	21	1	10	1	10
4,000	20	8	4	24	3	0	1	11	2	9	1	0	1	14	3	11
4,800	12	8	8	26	3	4	3	27	2	12	3	24	1	17	1	13
4,800	16	12	4	26	3	5	1	13	2	13	1	0	1	17	2	17
6,000	20	12	4	31	3	17	3	15	3	3	2	5	2	4	3	22
6,400	16	8	8	32	4	0	2	3	3	5	2	26	2	6	2	3
6,400	16	16	4	32	4	0	1	5	3	5	2	0	2	6	1	5
7,200	12	12	8	33	4	3	3	13	3	8	2	12	2	8	3	6
7,200	24	12	4	36	4	10	1	27	3	13	3	11	2	12	0	27
8,000	20	16	4	38	4	15	1	10	3	17	3	2	2	14	3	24
8,000	20	8	8	38	4	15	3	9	3	18	1	11	2	15	1	23
9,600	16	12	8	40	5	2	1	3	4	3	3	3	2	19	3	3
9,600	24	16	4	44	5	10	1	17	4	10	0	6	3	3	2	17
10,000	20	20	4	45	5	12	3	10	4	12	0	3	3	5	0	3
12,000	20	12	8	47	6	0	2	23	4	18	3	24	3	10	3	2
12,000	24	20	4	52	6	10	1	8	5	6	1	3	3	15	0	8
12,800	16	16	8	48	6	3	0	18	5	0	3	24	3	12	0	18
14,400	24	12	8	54	6	19	1	0	5	14	1	3	4	1	3	14
14,400	24	24	4	60	7	10	0	27	6	2	1	27	4	6	1	27
16,000	20	16	8	56	7	4	0	22	5	18	1	5	4	4	2	22
16,800	28	24	4	68	8	10	0	16	6	18	2	22	4	17	3	16
19,200	24	16	8	64	8	5	0	9	6	15	1	26	4	17	0	9
19,200	32	24	4	76	9	10	0	9	7	14	3	20	5	9	1	9
20,000	20	20	8	65	8	7	2	2	6	17	1	23	4	18	1	23
24,000	24	20	8	74	9	10	3	23	7	17	2	16	5	12	0	27
28,800	24	24	8	84	10	16	2	18	8	17	3	7	6	7	1	18
33,600	28	24	8	94	12	2	1	21	10	2	3	24	7	2	2	7
38,400	32	24	8	104	13	8	0	27	11	0	0	16	7	17	2	27

5 ft. 0 in. SQUARE PLATES

Nom. Capa'ty in Galls.	Length.	Width.	Depth.	No. of Plates.	Approximate Total Weights.											
					3/16" Thick.				1/4" Thick.				5/16" Thick.			
	ft.	ft.	ft.		T.	C.	Q.	Lb.	T.	C.	Q.	Lb.	T.	C.	Q.	Lb.
775	5	5	5	5		18	0	27		14	3	6		10	3	4
1,550	10	5	5	8	1	9	1	10	1	3	3	10		17	1	18
2,325	15	5	5	11	2	0	1	19	1	12	3	12	1	4	0	2
3,100	20	5	5	14	2	11	2	1	2	1	3	15	1	10	2	15
3,100	10	10	5	12	2	4	2	2	1	16	1	2	1	6	2	14
4,650	15	10	5	16	2	19	0	17	2	8	0	17	1	15	1	5
6,200	10	10	10	20	3	15	1	11	3	1	2	11		..		
6,200	20	10	5	20	3	14	1	0	3	0	2	0	2	4	1	20
6,975	15	15	5	21	3	17	1	26	3	3	0	5	2	6	0	19
7,750	25	10	5	24	4	9	0	12	3	12	2	12	2	13	1	8
9,300	15	10	10	26	4	18	1	14	4	0	2	0		..		
9,300	20	15	5	26	4	16	1	10	3	18	1	24	2	17	2	8
11,625	25	15	5	31	5	15	0	9	4	13	3	2	3	8	3	12
12,400	20	10	10	32	6	0	1	23	4	18	1	23		..		
12,400	20	20	5	32	5	19	0	3	4	17	0	3	3	11	1	7
13,950	15	15	10	33	6	2	3	3	5	0	0	10		..		
13,950	30	15	5	36	6	13	2	23	5	8	3	23	4	0	0	3
15,500	25	20	5	38	7	1	2	3	5	15	1	17	4	4	3	13
15,500	25	10	10	38	7	3	0	16	5	17	0	2		..		
18,600	20	15	10	40	7	10	0	21	6	2	2	21		..		
18,600	30	20	5	44	8	4	0	3	6	13	3	3	4	18	1	19
19,375	25	25	5	45	8	7	2	21	6	16	3	0	5	0	2	10
23,250	25	15	10	47	8	17	2	3	7	5	0	24		..		
23,250	30	25	5	52	9	13	3	16	7	18	0	16	5	16	1	12
24,800	20	20	10	48	9	1	1	19	7	8	1	19		..		
27,900	30	15	10	54	10	3	1	5	8	6	0	19		..		
27,900	30	30	5	60	11	4	0	0	9	2	3	0	6	14	2	4
31,000	25	20	10	56	10	11	2	21	8	13	0	21		..		
32,550	35	30	5	68	12	11	3	10	10	5	0	10	7	10	1	22
37,200	30	20	10	64	12	2	0	17	9	18	0	17		..		
37,200	40	30	5	76	14	3	2	3	11	11	1	3	8	10	0	23
38,750	25	25	10	65	12	4	2	8	9	19	3	15		..		
46,500	30	25	10	74	13	19	2	4	11	8	2	18		..		
55,800	30	30	10	84	15	18	0	23	13	0	1	23		..		
65,100	35	30	10	94	17	15	3	4	14	11	0	18		..		
74,400	40	30	10	104	19	15	1	26	16	3	3	26		..		

WEIGHT OF STANDARD 4 ft. 0 in. SQUARE PLATES

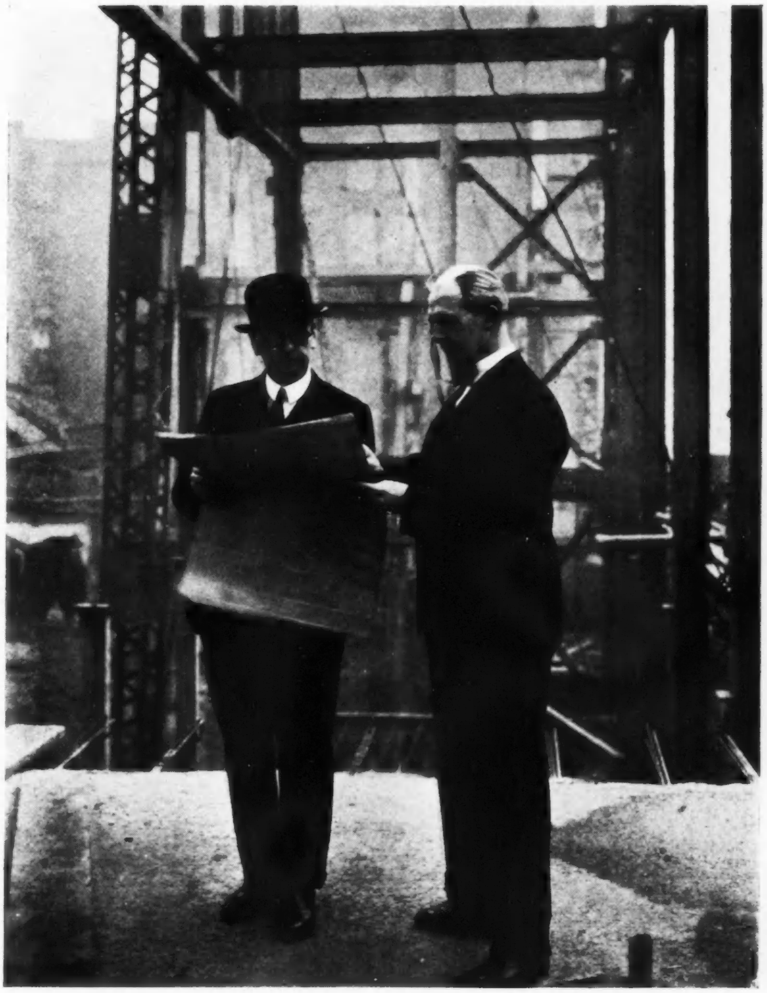
1/8 in. thick, each		3 qrs.	20 lbs.
3/16 in. ,, ,, ...	1 cwt.	1 qrs.	0 lbs.
1/4 in. ,, ,, ...	1 cwt.	3 qrs.	4 lbs.
5/16 in. ,, ,, ...	2 cwt.	0 qrs.	17 lbs.

WEIGHT OF STANDARD 5 ft. 0 ft. SQUARE PLATES

1/8 in. thick, each	1 cwt.	1 qrs.	13 lbs.
3/16 in. ,, ,, ...	2 cwt.	0 qrs.	5 lbs.
1/4 in. ,, ,, ...	2 cwt.	3 qrs.	4 lbs.
5/16 in. ,, ,, ...	3 cwt.	1 qrs.	7 lbs.

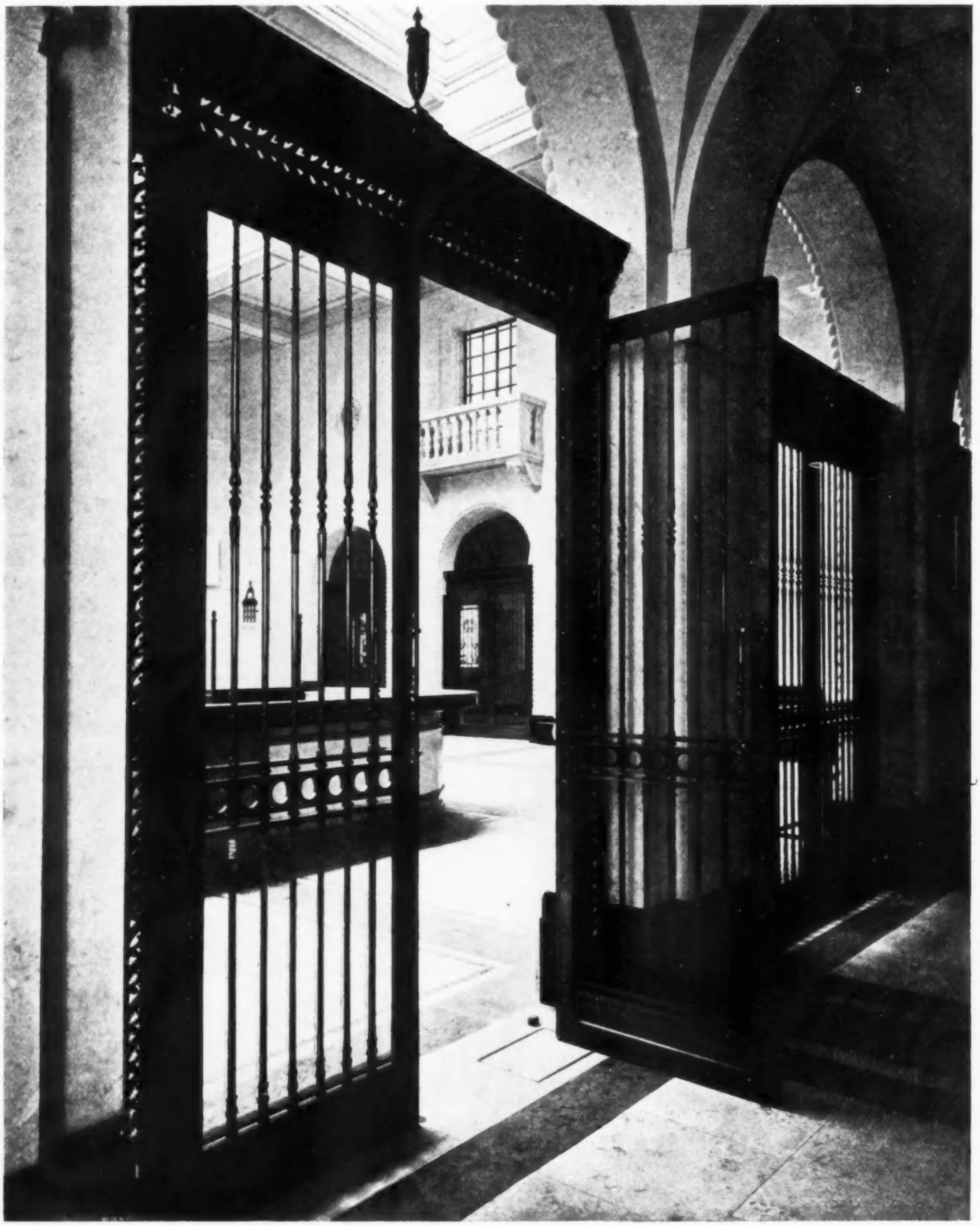
PROGRESS OF THE R.I.B.A. BUILDING

THE PRESIDENT VISITS THE SITE



LAST week the President of the R.I.B.A., Sir Giles Scott, R.A., paid his first official visit to the new R.I.B.A. building, now under construction in Portland Place, London.

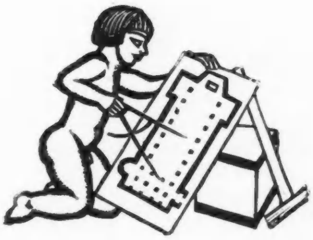
He is here seen (on the left) discussing a blue-print with Mr. G. Grey Wornum, the architect.



BIRMINGHAM MUNICIPAL BANK

The new head office of the Birmingham Municipal Bank was opened recently by H.R.H. Prince George. The building was the subject of an open competition held in 1931, for which Sir Reginald Blomfield, R.A., was the assessor; and the winning design was that of Mr. T. Cecil Howitt.

Above is a view looking through the bronze doors into the main banking hall. The bank is further illustrated on pages 755-758 of this issue.



PUBLIC RELATIONS AT THE R.I.B.A.*

IN a simple Utopian society, where every member of it was fully aware of the articulation of its structure, there would be no need of any special organization to correlate the functions of its parts and explain their inter-dependence. In ours, where the situation is complicated by barriers of custom and prejudice, and even essential constitutional measures have to be justified by propaganda before they can be publicly accepted, some kind of liaison service is necessary in every department to foster understanding and co-operation between its internal machinery and the public.

Failure to recognize this necessity for a liaison or "public relations" service in some sections of the community is one of the major causes of breakdown in our social machinery. In other sections the principle is already accepted but its action delayed by confusion between its primary educative and secondary persuasive functions. In official circles, for instance, we have, on the one hand, the recent dispersal of the Government's most effective public relations organization—the Empire Marketing Board—a disappointingly retrograde step, as is the even more recent decision to abolish the poster sites which that body had accumulated—a chain of sites which would provide an admirable permanent medium of social propaganda. On the other hand, we have the excellent appointment of Sir Stephen Tallents, who was chiefly responsible for the effectiveness of the Empire Marketing Board, to the newly-created position of Public Relations Officer to the Post Office; indicating, let us hope, that the need of a permanent liaison organization is recognized at least in some directions.

However, we are not here concerned with the shortcomings of the Government in the field of public relations, so much as with the equal, if not greater, importance of public relations in other essential departments of the community—particularly in architecture.

Now the architect during the last hundred years has fallen, unfortunately, away from his established position as the specialist to whom all questions of planning—in its widest sense—are automatically delegated; partly owing to his failure to keep pace with contemporary needs, and partly to the esoteric tendency inherent in his professional organization, which has prevented him from undertaking the subsequent responsibility of re-establishing workable public relations. He has treated his public relations as poor relations whom it is safe for him to ignore in the mass and to patronize on occasions with the feeling that he is doing them a favour. The public have replied with the inevitable *tu quoque*, and relegated the architect to a position where the public does the patronizing, and makes use of the architect only arbitrarily and spasmodically instead of inevitably. Planning, like ornament, has become something to be added only if you can afford it.

The current movement in support of a less superficial attitude to planning and design is a challenge to the profession generally, and to such bodies as the R.I.B.A. (which control its affairs) in particular, to take hold again of the responsibilities they have lost and prove to the industrialist and the public their natural authority to take charge of everything within their ancient province. Concerted persuasion to this end, however, is impossible without some organized machinery of persuasion; without, in fact, a public relations service within the architectural profession.

We drew attention to the need of this in a leading article some months ago, and drew also the analogy between the architectural profession and the medical, instancing the British Medical Association as a professional controlling body that had accepted its responsibilities, and that concerned itself not only with the interests of its members but with the advancement of national well-being. We pleaded then for the establishment of a Public Relations Committee in the R.I.B.A., and since that time a committee with such a title has been formed; but it is still only too true that the B.M.A. is far ahead of the R.I.B.A. in doing its share of the appropriate educative propaganda. The B.M.A. is continually in touch with social requirements, and wisely takes full advantage of modern educative opportunities. Recently, for example, the Association published a pamphlet of advice to the public on the subject of nutrition, and the B.B.C. devoted fifteen minutes of one of their news programmes to discussion of it. That is an example of useful liaison work; similar work could be done by the R.I.B.A. Public Relations Committee in its own architectural sphere.

It is not advertising the value of the architect that is called for; his value will be automatically recognized when he has proved his willingness to accept his social responsibilities. This the doctor did when the system of voluntary service in the hospitals was instituted in the middle of last century, from which time dates his position of unquestioned authority.

It is the duty of the R.I.B.A. to widen its activities beyond a merely esoteric outlook, and, through its Public Relations Committee, not only to impress on the public the essential service of planning, but to provide the architect with the means of exercising his planning prerogative.

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NOTES & TOPICS

LIGHTS OF BROADWAY

I WAS invited last week to a public meeting at Broadway, where Daniel, in the shape of Mr. G .A. Jellicoe, had to face the local lions, armed with nothing but a plan—his new plan of the district, one of the first to be got out under the new Act.

*

Let me confess at once I meant to be bored. So, no doubt, did the audience. Biting cold, a black night, the dimly lit village hall—outside, the fog-bound village, on the dark, wind-cut Cotswolds. A night for the fireside or the picture-drome. The sight of the plan made one understand why architects are not popular people.

*

Then Mr. Jellicoe began. With suave intimate words, with compelling brown eyes—all alertness and intelligence—he started to hand out the low down on landscape architecture to the blacksmith, the farmer, the farm hand, the errand boy, the mechanic, the decayed gentlelady, the vet., the doctor, the local M.F.H., the local gentry, the wives, and of course, seeing that it was Broadway—the Russells.

*

Not many architects would care to face an audience like this. Mr. Jellicoe faced them, and faced them without notes. He wove about them a spell wherein trees took on a new significance and space an architectural meaning.

*

The audience sat entranced. Occasionally a breathless "See, Bert, *our* field" broke from the lips of a magenta-coloured yokel as a new slide came on to the screen. The rest was silence, broken only by the scraping of chairs. At the end, after the plaints of the local bolsheviks had been heard in a freezing silence, the resolution accepting Mr. Jellicoe's plan for the village was passed *nem. con.*

SIR OWEN WILLIAMS ON RE-HOUSING

Sir Owen Williams's article in *The Evening Standard* of Friday last was a thumping contribution to the slum clearance problem, not because it stands any or much chance of early realization but because it stated clearly and boldly what few people realize, namely, that *London is not overcrowded*, only badly planned.

*

That new slum clearance blocks *are* bringing unnecessary overcrowding and the acceptance of a high figure of density, and that nothing short of re-planning will take us out of the mess we and our fathers have landed ourselves in.

*

His scheme of rigid lines of north and south running "wall" blocks is logical but as impossible and inhuman as Penn's gridiron plan for Philadelphia. I believe in its logic, but I have no faith in its realization. In its essentials it is the bones of a reconstruction plan for London—if London were flat. But thank God it isn't.

*

Anyway, I'm not boggling over these terms so long as the L.C.C. shows not the slightest intention of re-planning, or even of making up its mind how it would re-plan if it could.

*

How can it hope to revise the laws, or set about the controlling of wide enough areas to make any plan effective. It can't. And that alone is sufficient argument for the formation of a central authority for re-planning our wasted, wasteful cities.

L. H. KEAY

Mr. L. H. Keay, Liverpool's Director of Housing is embarking on a ten-year-plan to rid Liverpool of slums, and he sees his opportunity in the miserably drab area lying behind the docks. It is possible, he believes, to drive through the area a road as wide as the Unter den Linden, and to open up the spaces on either side for the building of great tenement blocks.

*

Mr. Keay came to Liverpool in June, 1924. Since that date, under the 1924 Act, 17,710 houses and 1,306 tenements have been built in the city. Under the projected scheme, however, the proportion of tenements to houses is reversed. 5,000 houses will be erected at a cost of two million pounds, and 10,692 tenements at a cost of nearly six million pounds.

*

When, because he advocates high buildings, Mr. Keay is accused of introducing modernistic architecture into Liverpool, he explains that a great housing problem must be approached in an entirely new way, that traditional methods are not sufficient.

*

Something different from the traditional system of building cottages without playgrounds or recreation spaces for children becomes an urgent need. It is through building tenements that the central area of the city may

Photo: Lafayette, Ltd.

L. H. Keay, Director of Housing in Liverpool. See Astragal's note on page 750.

be opened up, and many thousands of people may be housed near their place of work.

*

It is significant that many local authorities in the country, who have housing problems to face, are turning their attention to the Liverpool schemes.

THE A.A. PANTOMIME

" Amateur theatricals " are, as a rule, highly enjoyable to the cast and others concerned in the production, and excruciatingly tedious to the members of the audience who are brow-beaten and cudgelled into sitting through the performance.

*

Somehow the " A.A. Panto." (which is, of course, rarely a pantomime at all) seems to stand in a place apart, and is always, to me, one of the enjoyable events of the year. The show which is running all this week is no disappointment.

*

Slum Scene is a cleverly thought out and admirably presented ballet. It introduces a topical element, which has sometimes been lacking and is of paramount importance. In fact, I wish that there were more leg-pulling of the architectural world. (Heaven knows, there is material enough.)

*

The plot is merely that, on the appearance of the architect (immediately he has received his guinea) the slums vanish as if by magic. And so, let us hope, it shall be in practice. The Minister of Health should see this scene.

*

I do wish, though, that the students would not try to be sophisticated. Dreamy dances and smart indelicacies (though quite amusing) are done so much better by Messrs. Cochran, Charlot and the rest, that the A.A. is quite out of its depth when it tries to emulate.

There are so many things that the A.A. can be original about in idea, and present so originally, too, as not to compete with Mr. Cochran, that I am surprised to find the chances lost.

*

The ballet *Jeux d'Architectes* is quite the best thing the A.A. has done for some years—and the charm of it is that on the West End stage it could not be done at all.

*

Ode to a Woodland Glade began as good knockabout, but was too long and lacked a climax ; but I must confess that I was helpless with laughter most of the time.

*

E. R. Lewis is this year's mimic, and I should not have been sorry to see and hear more of him. His chat by Håart Råbotson must be the least little bit confusing to that very eminent architect, because the mimicry is often mirror-like.

*

The show finishes with a troup of acrobats in the very best music-hall style.

*

Having so far been polite, if not eulogistic, may I say that there aren't *nearly* enough personalities ?

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, December 14

SOCIETY OF ANTIQUARIES. At *Burlington House, W.*1. " The Excavations at Pant y Saer, Anglesey." By C. W. Phillips, F.S.A. " A Mesolithic Settlement Site at Selmeston, Sussex." By Graham Clark, F.S.A. 8.30 *p.m.*

INSTITUTION OF STRUCTURAL ENGINEERS. " Rigid Frame Bridges in Reinforced Concrete." By A. P. Mason. 6.30 *p.m.*

INSTITUTION OF CIVIL ENGINEERS. (*Yorkshire Branch.*) At the *Hotel Metropole, Leeds.* " Sydney Harbour Bridge." By J. Walton. 7.30 *p.m.*

Friday, December 15

INSTITUTION OF STRUCTURAL ENGINEERS. (*Western Counties Branch.*) At the *Merchant Venturers' Technical College, Bristol.* " Reinforced Concrete Bridges." By T. J. Gueritte. 7.15 *p.m.*

(*Midland Counties Branch.*) At the *James Watt Memorial Institute, Birmingham.* Discussion on " Welded Structures." 7 *p.m.*

NORTHERN POLYTECHNIC ARCHITECTURAL SOCIETY. At *Holloway, N.*7. " Flats." By T. P. Bennett, F.R.I.B.A. 8 *p.m.*

LONDON SOCIETY. At the *Royal Society of Arts,* 18 *John Street, Adelphi, W.C.*2. " The Old Royal Palace of Whitehall." By Percy W. Lovell, F.S.A. 5 *p.m.*

Saturday, December 16

ROYAL COLLEGE OF ART. At the *North Court, Victoria and Albert Museum, S. Kensington.* Exhibition of works by the Royal College of Art Sketch Club. Closing day.

Monday, December 18

ROYAL INSTITUTE OF BRITISH ARCHITECTS. At 9 *Conduit Street, W.*1. " New Materials and New Methods." By S. Chermayeff, F.R.I.B.A. 8 *p.m.*

Tuesday, December 19

INSTITUTION OF ELECTRICAL ENGINEERS. (*North-Western Centre.*) At the *Engineers' Club,* 17 *Albert Square, Manchester.* " Electromagnetic Phenomena in High-Voltage Testing Equipment." By B. L. Goodlet. 7 *p.m.*

(*Scottish Centre.*) At the *Engineers' Rooms,* 39 *Elmbank Crescent, Glasgow, C.*2. " The Cathode-Ray Oscillograph and Some of Its Applications." By G. Pau. 7.30 *p.m.*

Wednesday, December 20

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS. At *Southampton Row, W.C.*1. " French Mediæval Architecture : IV. Fortified Towns, Castles, Hotels-de-Ville." By Sir Banister Fletcher, F.S.A., P-P.R.I.B.A. 6 *p.m.*

NEWS

●

POINTS FROM THIS ISSUE

The architect during the last hundred years has fallen away from his established position as the specialist to whom all questions of planning are automatically delegated 749

It is possible . . . to drive through the area a road as wide as the Unter den Linden 750

It is precisely for those who want to get away from crowds and noise that the Downs should be preserved 752

Old-style Sussex Race Track 754

Table showing comparison of costs between the L. H. de Koninck system of small house construction in Belgium and traditional construction in local bricks 774

●

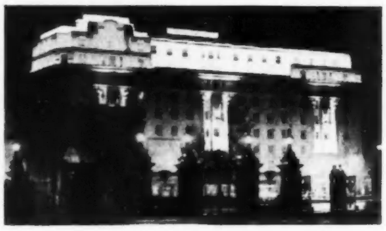
THE PRINCE OF WALES AND SLUM

The Prince of Wales, addressing a gathering of over 7,000 members of Toc H at their eighteenth Birthday Festival at the Albert Hall on Saturday last, said : " Housing conditions should be very closely studied during the next twelve months. Not only are our slums a disgrace in these modern times, but rebuilding, rehousing, and clearing the slums mean a stimulus to almost every industry that we have in this country, and that means greater employment and a greater measure of all-round prosperity."

THE BRIGHTON RACE TRACK

The Times, on Tuesday, December 12, devoted a leading article to discussion of the proposed motor race track on the South Downs. The writer of the article said : " This week is likely to be eventful in the history of the Sussex Downs and of town-planning in England. Last Friday our Brighton correspondent reported that the Brighton Town Council, sitting as a general purposes committee, had decided to lease more than a thousand acres of high-lying downland to the promoters of a 'super motor-racing track.' There was no doubt, he added, that the scheme would pass the Brighton Town Council. The land, however, though it belongs to the Brighton Corporation, is all within the area of the Portslade Urban District Council, which also will consider the proposal this week. The Portslade Urban District Council has scheduled this area for preservation as a public open space in its planning scheme. If it should grant the interim development order for which it will be asked, then the scheme will go through, since the Town and Country Planning Act makes no provision for an appeal in such circumstances.

"A motor-racing track in that situation is fundamentally objectionable—objectionable because it cannot help being noisy ; objectionable because it cannot help being dirty ; objectionable because, if it escapes being unsightly or absurd, it cannot fail to be at variance with the natural simplicity of the Downs ; objectionable because, unless it is a failure, it will attract thousands of people who must get there in their motor-cars ; objectionable because it is a flat defiance of the very qualities which make the South Downs worth preserving as a national treasure. To say that this part of the Downs is 'very dreary,' or even not particularly attractive, would be, even if true, no argument. The object is not to preserve only the most picturesque parts of the Downs, but the whole, so that nowhere on their whole expanse shall there be noise and crowds and traffic and dirt. To say that there are few people to be seen there is to plead against, not for, the scheme ; because it is precisely for those who want to get away from crowds and noise that the Downs should be preserved, seeing how much of the remainder of England has lost its power to offer that particular sort of recreation."



The new Cumberland Hotel, Marble Arch, W.1, which was officially opened on Tuesday last. Architect: F. J. Wills. Architect-Designer for Public Rooms : Oliver P. Bernard. (*See note on this page.*)

The Times leader is reinforced in the same issue by a letter from Lord Buxton, in which he refutes in detail some criticisms that had been made against an earlier letter of his condemning the project.

RECOVERY CAN BE HASTENED

Further support for the campaign of the Building Industries National Council was forthcoming during the last week. The City Editor of "The Evening Standard," writing under the above heading on December 11, stated :—

" Compared with a year ago, banking deposits have declined slightly. They are now £1,927,988,000, whereas a year ago they were £1,950,792,000.

" Bankers have declared recently that a considerable trade revival can be financed out of the present volume of banking resources.

" The Government could by a large public works programme force on the recovery which would bring money and credit into more extensive use.

" No valid objection to such a programme has yet been raised ; it is, on the contrary, winning city converts daily. Whitehall should bring out all the sound schemes for public works which were sacrificed in the interests of 'economy.' "

The Special Committee for Public Relations of B.I.N.C. will spare no effort in putting forward the expansionist view of public works at every opportunity.

THE CUMBERLAND HOTEL

The Cumberland Hotel, situate on one of the finest sites in London—Marble Arch—was opened to the public at the beginning of the week.

Sir Isidore Salmon, C.B.E., M.P., speaking at a luncheon which preceded the private view on Monday last, said he ventured to think that the opening of the new building would mark an epoch in the hotel history of this country. It was the first time that an hotel of that size, with all the amenities of a super-luxury establishment, had been made available to the public at a reasonable price. It was his belief that not only had they met a public want, but that they had an hotel which would be counted as a national asset. He also mentioned that in the next three or four months they hoped to open a garage adjoining the hotel capable of holding 500 cars.

The new hotel, constructed externally of Portland stone, contains no fewer than 13 floors, eight of them above ground level.

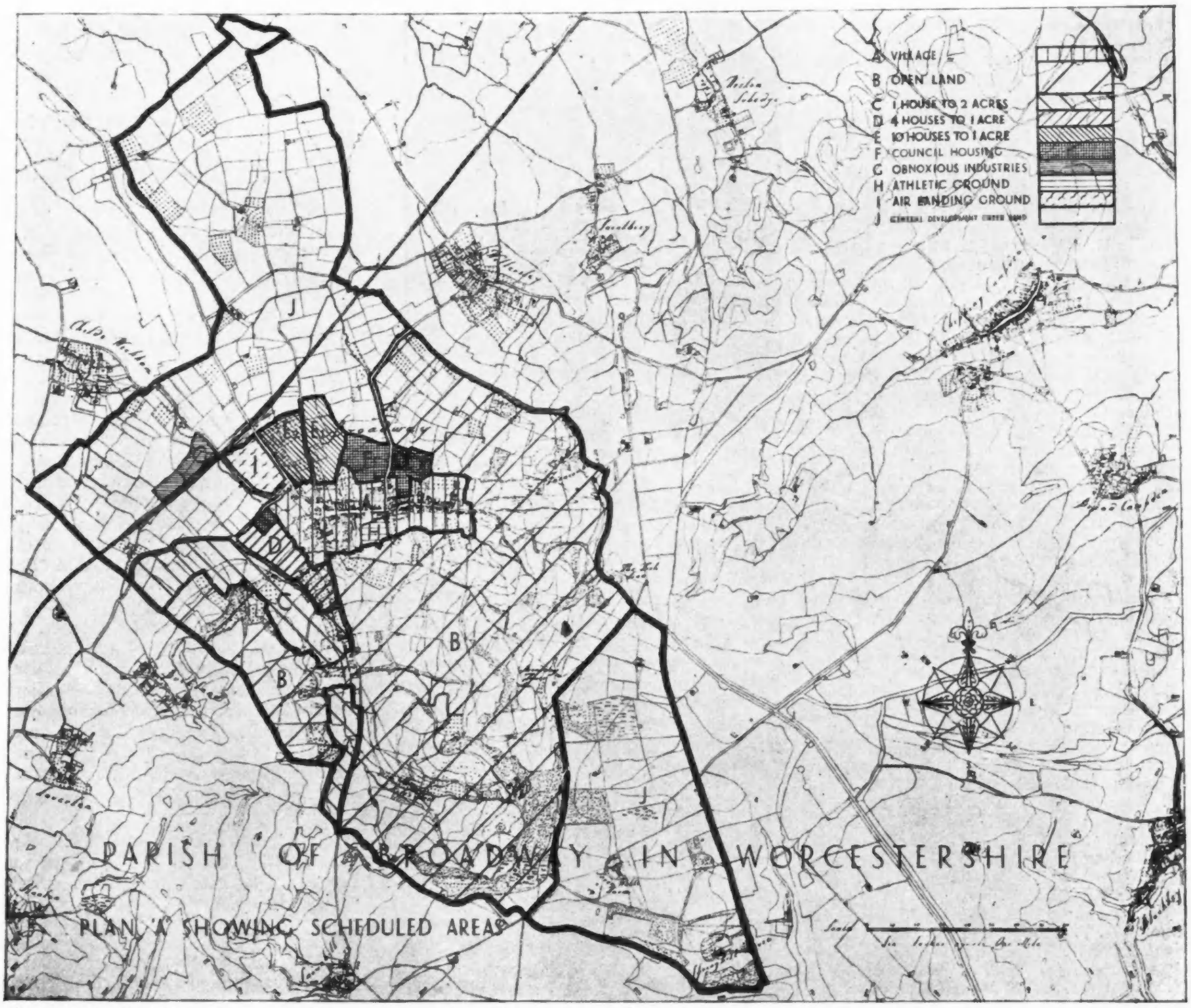
WEST YORKSHIRE SOCIETY OF ARCHITECTS

A meeting of the Students Union of the above Society was held at Leeds School of Architecture on December 6, when an address was given by Mr. Clough Williams-Ellis, F.R.I.B.A. Mr. J. S. Allen presided.

Mr. Williams-Ellis said beauty improved the individual and that life could not be lived without it, and people must be made to realize that before they would accept the architect. The days of private patronage were over and the architect had to seek other sources of employment.

That over 80 per cent. of our own people lived in towns—towns that had been provided for barbarians. No wonder those who wanted to escape went into the country and carried their vulgarity with them. Our towns should be made at least tolerable.

Speaking of the war on slums, the lecturer said that it did not seem to him to be much of a war but more like a sham fight. War needed mobilization ; yet he,



Plan of the Parish of Broadway, Worcs., prepared for the residents and traders by G. A. Jellicoe, and unanimously accepted by them at a meeting in Broadway last week. The central area is scheduled as a place of historic and architectural interest, and the broad encircling area to the east as open land. See Astragal's note on page 750.

as an architect had never been pressed into the service to do his bit. On the contrary he was encouraged to play about with luxury building, whereas if he were tackling the slum problem seriously, about half or a quarter of his time would be conscripted in the service.

With regard to ugly buildings and "eligible" villas, he thought there would have to come some sort of public ownership, so that nobody would have the private right to do a public wrong.

THE CENSOR IN THE CHURCHYARD

An ecclesiastical inquiry which was to have been held at Elmstead, near Colchester, regarding the placing of a memorial in the parish churchyard was postponed at the eleventh hour (states *The Daily Express*).

Mrs. Sarah Smith, a seventy-six-year-old widow, desired to erect a white marble kerb and headstone on the grave of her husband, but the vicar refused permission unless a faculty was obtained from the chancellor of the diocese.

The Bishop of Chelmsford upheld the vicar, and wrote: "White marble is not only a foreign product but is inartistic, and there is a very strong movement to get native stone used as memorials in churchyards, or at least some English stone."

The inquiry was postponed to enable Mrs. Smith, who is supported by 180 parishioners, to decide her action.

R. I. B. A.

THE ASSOCIATESHIP: OFFICE EXPERIENCE

The R.I.B.A. have issued the following statement:—

"Attention is called to the decision of the Council of the R.I.B.A. that, owing to the present economic depression, and notwithstanding the regulation regarding twelve months' office experience, the Associateship of the R.I.B.A. shall not be withheld through inability to obtain such office experience. The time during which this concession is effective has now been extended until January 31, 1935.

"The effect of the decision is that a candidate who has been unemployed will be able to become a candidate for election as an Associate at the same time as if he had been employed.

"In the case of students of recognized schools of architecture, the length of time during which students have gained experience in architects' offices or the length of time during which they have been unable to obtain employment, in connection with their school course, may both be counted as part of the twelve months' experience required."

ELECTION OF MEMBERS

At a recent meeting of the Council of the R.I.B.A., the following members were elected:—

As HON. FELLOW (1): The Rt. Hon. Viscount Leverhulme.

As HON. ASSOCIATE (1): Sir Jonah Walker

Smith, Kt., M.P., M.INST.C.E., M.I.MECH.E., F.S.I., (London).

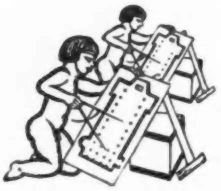
As HON. CORRESPONDING MEMBER (1) : Mr. Willem Marinus Dudok (Hilversum).

As FELLOWS (24) : Messrs. S. L. Blackburne ; C. S. Burgess ; R. A. Cordingley ; W. A. Cornell ; W. Cowie ; H. L. Fetherstonhaugh ; F. W. Foster-Turner ; B. George ; H. V. Hague ; P. K. Hanton ; M. R. Hofler ; J. C. McDougall ; J. G. Marr ; C. M. Master ; J. R. Maughan ; G. Stanley ; F. H. Swindells ; H. Tomlinson ; C. S. Buckingham ; R. J. Duke ; T. R. Eagar ; K. L. Murray ; A. R. Scrivener ; and P. H. Thomas.

As ASSOCIATES (100) : Messrs. E. Abrams ; J. S. Adams ; J. A. Alliston ; E. D. Andrews ; R. W. Beard ; W. H. Beattie ; E. R. Bedingfield ; G. P. Bell ; S. Bentley ; H. G. Bishop ; H. C. Boardman ; R. O. Bond ; A. R. Borrett ; J. B. Brandt ; (Miss) R. H. Brooks ; (Mrs.) H. Bryce ; W. T. Buttrick ; J. C. Carrick ; A. G. Church ; W. E. Coker ; F. R. Coleman ; R. E. Cookson ; L. C. Dawkins ; E. A. Day ; R. Dilworth ; G. W. Dixon ; A. Douglas-Jones ; J. D. Drake ; P. D. Dunham ; A. G. Fidler ; (Miss) A. Gascoigne ; J. V. Gedge ; A. Gill ; H. G. Goddard ; H. V. Godsall ; M. Goldstein ; H. T. Griggs ; R. R. Halahan ; V. Hamnett ; J. E. Harrison ; W. N. Hawkes ; P. B. Herbert ; T. T. Hewitson ; F. O. Hill ; H. M. Hutt (Miss) P. Jackson ; F. Johnson ; I. H. King ; J. W. Laing ; A. C. Layfield ; H. Lind ; D. Livingstone ; B. Locke ; J. D. Marsh ; S. F. Maskell ; M. Maung ; E. Mayorcas ; C. O. Middlemiss ; E. G. Miles ; L. W. Millard ; J. E. Moore ; J. R. Moore ; C. J. Morreau ; F. W. Mudd ; J. E. Nangle ; N. Narielwalla ; W. L. Nicholson ; A. B. Overend ; S. Parelkar ; L. Pearce ; R. B. Pearce ; (Miss) E. Philip ; A. J. Ralton ; J. E. Reid ; C. A. Richards ; G. D. Richards ; B. S. Roberts ; A. A. Robin ; M. F. Roe ; A. Ruddiman ; N. F. Sanders ; A. L. Sharpe ; N. B. Shroff ; C. H. Simmons ; H. A. Snow ; A. W. Sterling ; F. G. Stone ; C. S. Taylor ; A. W. Thornton ; W. H. Timmons ; C. M. Townend ; R. Vaughan ; M. G. Wardley ; W. E. Watson ; E. J. Whitwell ; (Miss) E. Wilmot ; A. V. Wise ; G. R. Wright ; H. M. Wright ; and A. R. Young.

As LICENTIATES (31) : Messrs. H. Alexander ; D. J. Barry ; M. S. Bell ; F. B. Blomfield ; R. Bostock ; F. Brooksby ; F. Brown ; B. L. Burge ; C. H. Coppack ; P. W. Dawney ; F. H. Field ; S. H. Grigg ; A. H. Hasnip ; G. H. Kitchin ; F. W. Lawrence ; W. H. Mackenzie ; T. N. McLay ; W. J. Medcalf ; A. Needham ; W. G. Norris ; H. F. Penty ; F. J. Powell ; D. H. Rees ; A. E. Russell ; D. Scott ; W. L. Sibbald ; L. T. Smith ; R. J. Sneller ; J. W. Spink ; D. A. Tyndall ; and A. P. Warren.

COMPETITION NEWS



THE BELFAST COMPETITION

After a delay of several months, the Belfast municipal architectural competition is to proceed. This decision was made at a meeting of the Tuberculosis Committee of the Belfast Corporation, when it was intimated by the City Surveyor (Mr. R. B. Donald, M.INST.C.E.) that negotiations with the R.I.B.A. in regard to the conditions had been satisfactorily concluded, an amicable arrangement having been reached on certain points at issue. The competition is for a design of the extensions projected at the Municipal Sanatorium, Whiteabbey, and three prizes of 500 guineas, 300 guineas and 100 guineas will be offered. As soon as the Corporation's sanction has been obtained, the conditions, etc., will be issued.

The late A. Dunbar Smith. See note on this page.

FLATS IN BETHNAL GREEN

The result of the limited competition for a block of working class flats in Bethnal Green, promoted by East-End Dwellings Co., Ltd., was announced last week as follows :

Design placed first : Mr. A. W. Kenyon, F.R.I.B.A.

Highly commended : Mr. C. H. James, F.R.I.B.A.

The assessor was Professor S. D. Adshead, F.R.I.B.A. ; and the other competitors were : Messrs. Pakington and Enthoven, FF.R.I.B.A. ; Kennedy and Nightingale, FF.R.I.B.A. ; E. B. Betham and F. M. Harvey, FF.R.I.B.A. ; and Davis, Emanuel and H. C. Smart.

[For Competitions Open, see last week's issue.

The Late Dunbar Smith

We regret to record the death of Mr. Arnold Dunbar Smith, F.R.I.B.A., of Smith and Brewer, which took place at Bournemouth on Thursday last in his sixty-eighth year.

Born in 1866, Mr. Smith was educated privately ; articled to the late Mr. John G. Gibbons, of Brighton ; and also studied at the Royal Academy Schools.

In collaboration with his partner, Mr. Smith designed the National Museum of Wales, Cardiff ; Heal's premises, Tottenham Court Road, W.C., the Albemarle Club, and the Passmore Edwards Settlement, Tavistock Place, London ; and, in the provinces, the East Anglian Sanatorium, Nayland, Suffolk ; Rushymead, Coleshill, Bucks ; Ditton Place, Balcombe ; and Old Buckhurst, both in Sussex.

Since the death of his partner, Mr. Smith was responsible for additions to the Fitzwilliam Museum, Cambridge, the Marlay extension of two galleries, opened in 1924, and the Courtauld extension—a block of eight galleries—opened in 1931. His latest work was the staircase at Heal's premises, which was illustrated in our last issue.

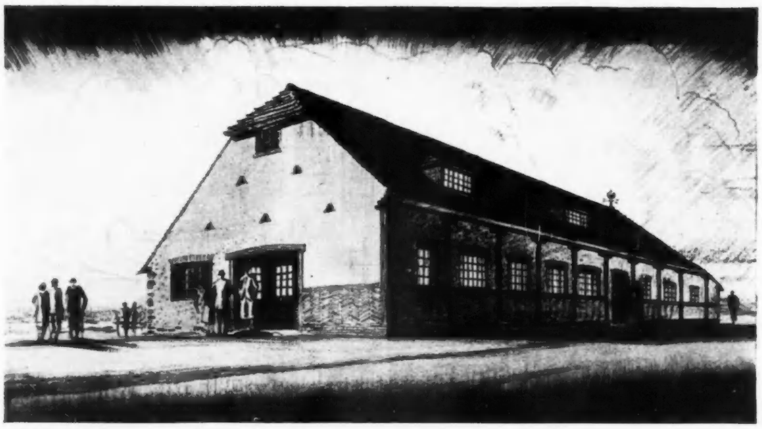
Mr. James Finlar McMullen, J.P., M.I.C.E.I., of Cork, left £23,729 (personal estate in England and the Irish Free State).

Changes of Address

Mr. T. Spencer-Rutter, Architect and Surveyor, has removed his offices to "Avondale," Doyle Gardens, Harlesden, N.W.10.

Mr. E. William Palmer, Registered Architect, has removed his offices to 15 Queen Anne's Grove, Bush Hill Park, Enfield.

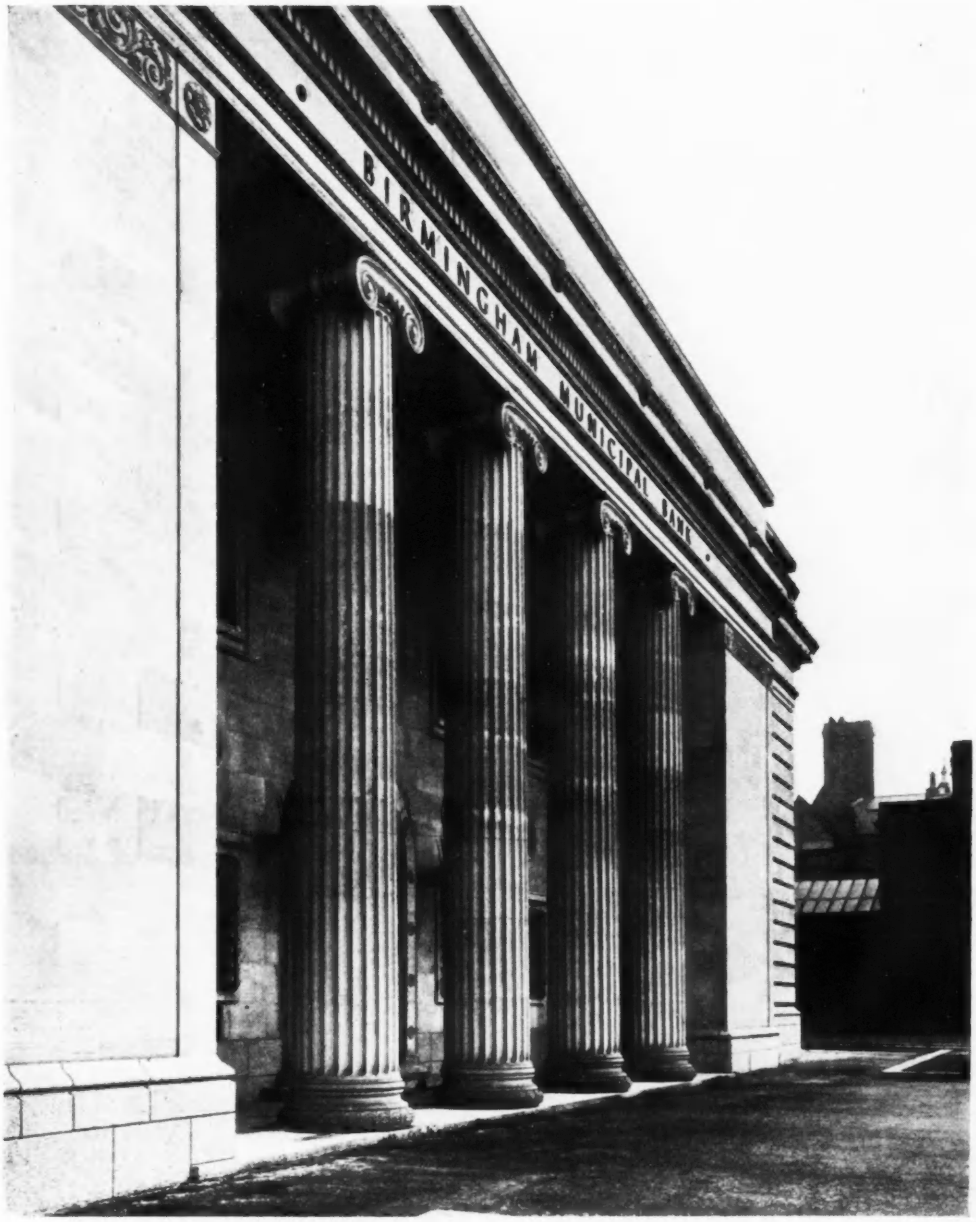
THIS ARSHETECTURE



Old-style Sussex Architecture. A drawing of one of the buildings for the proposed Brighton Motor Race Track, designed to resemble an old tithe barn.

[*From* THE SUSSEX DAILY NEWS.]

BIRMINGHAM MUNICIPAL BANK

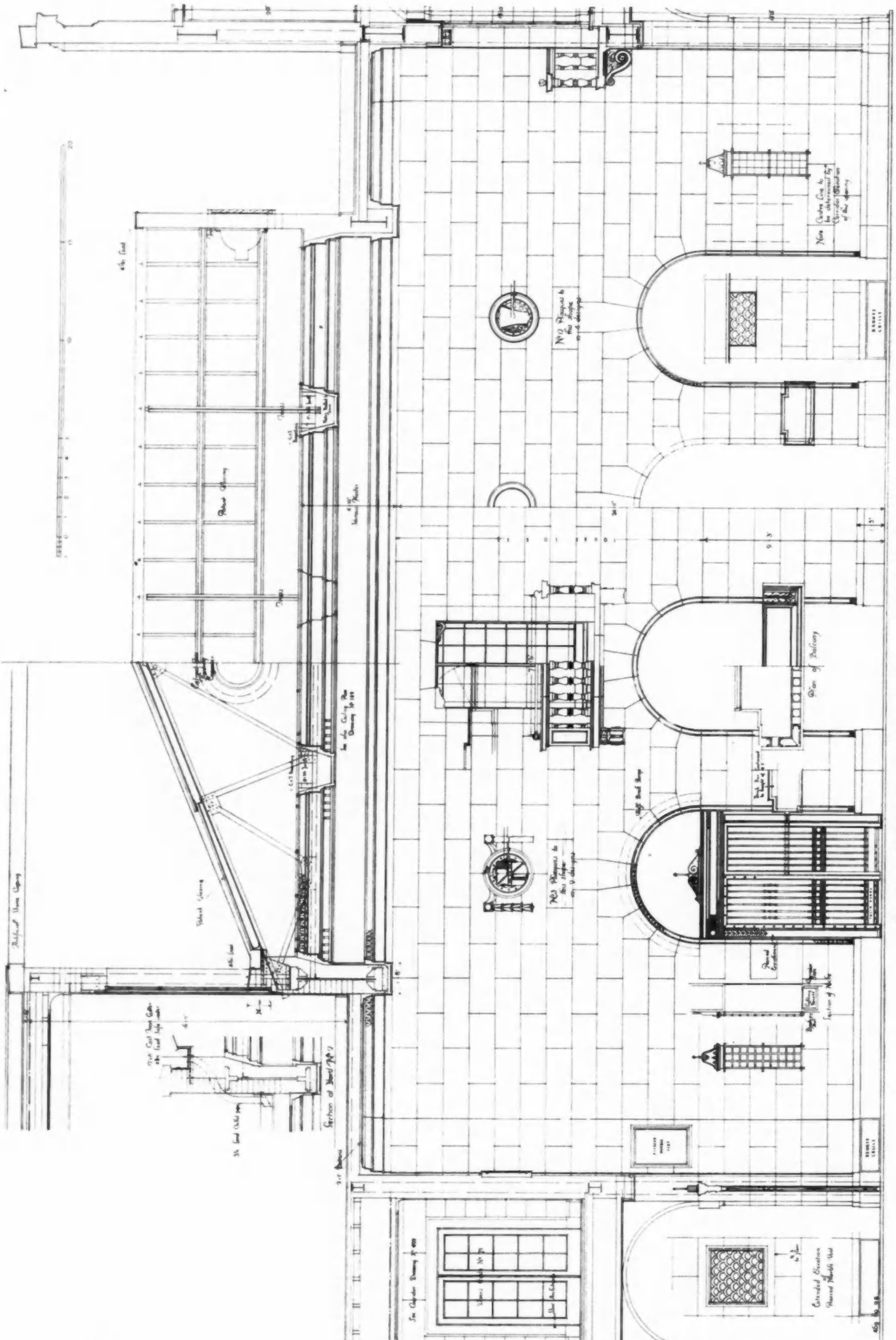


The building has been designed to be in keeping with the Masonic Temple, which adjoins it on the eastern side. It is of steel framed construction with hollow-tile floors, and strong rooms and safe deposit department in reinforced concrete.

The northern frontage to Broad Street (illustrated above), the western frontage facing the contemplated Mansion House, and the north-eastern elevation near the Masonic Temple, are of Portland stone with a base of axed Cornish granite. The remainder of the eastern elevation and the southern elevation are in cream coloured bricks.

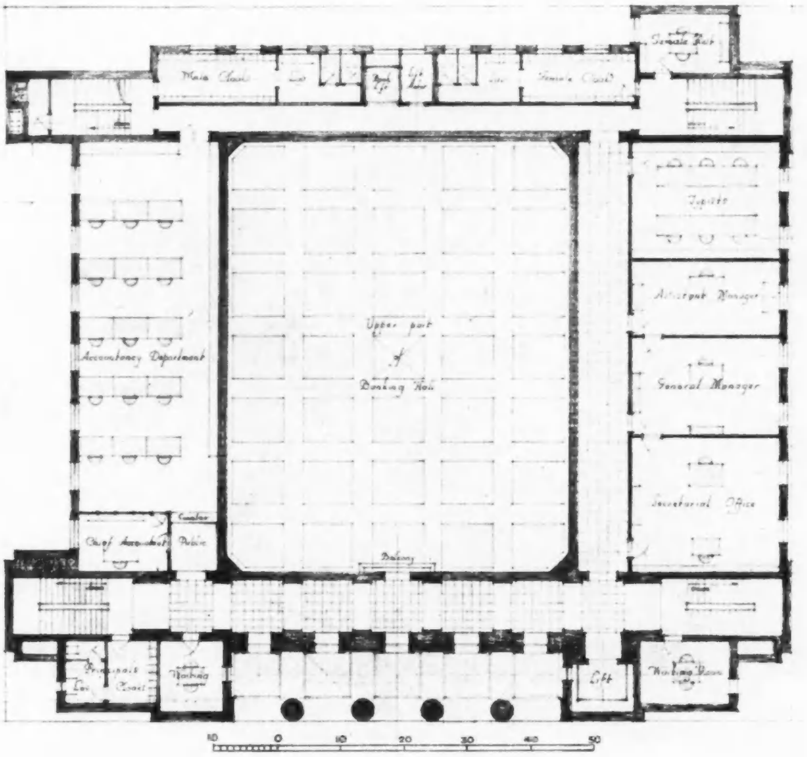
DESIGNED BY T. CECIL HOWITT

BIRMINGHAM MUNICIPAL BANK:

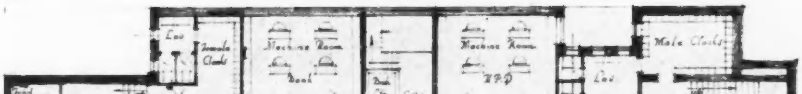


DETAIL SECTION THROUGH THE BANKING HALL.

BY T. CECIL HOWITT

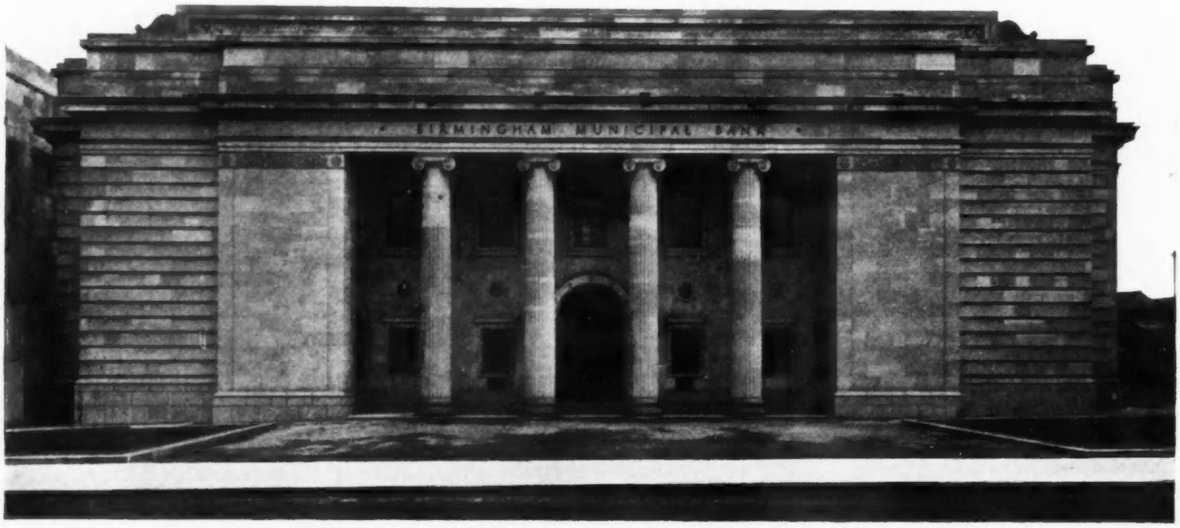

Male Clerks
Lav
Lav
Female Clerks
Female Rest
Typists
Assistant Manager
General Manager
Secretarial Office
Accountancy Department
Upper part
of
Banking Hall
Chief Accountant
Public
Balcony
Principals
Lav
Closet
Waiting
Lift
Waiting Room
10
0
10
20
30
40
50

FIRST FLOOR PLAN

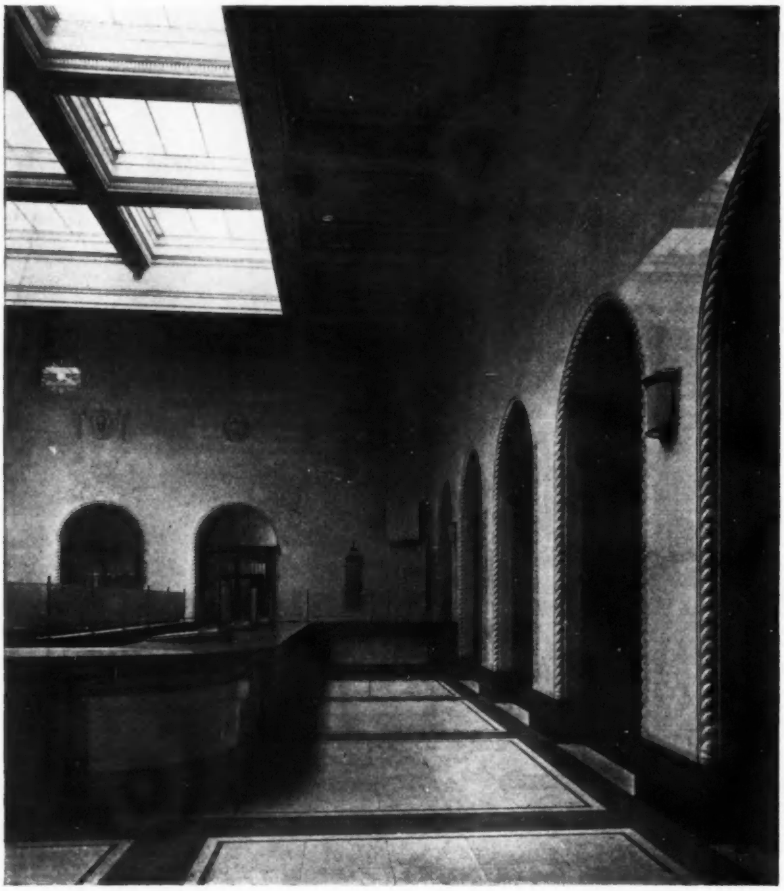

Lav
Female Clerks
Machine Room
Bank
Machine Room
Male Clerks
Lav
Corridor
Controller 1
Credit & Transfer
Controller
Cheques
Controller House Purchase Department
Interview 1
Interview 2
Ante
Interview 3
Special Ledger Cabinets
The Banking Hall
House Purchase Department
Counter
Public Space
Ante
Interview 1
Interview 2
Interview 3
Entrance Hall
Controller 2
Telephone Exchange
Lift
Interview 4
10
0
10
20
30
40
50

GROUND FLOOR PLAN

BIRMINGHAM MUNICIPAL BANK



The main entrance front in Broad Street, with central door in enriched bronze. A flood-lighting system has been designed for the portico.



DESIGNED BY

T. CECIL HOWITT

The banking hall, another view of which, showing the bronze doors, is given as this week's frontispiece. The entrance hall and banking hall are paved with biscuit-coloured marble slabs and panelled grey marble margins; the walls are of pale biscuit-coloured marble slabs with an egg-shell surface and black marble skirting. The vaulted entrance hall ceiling and the coffered ceiling to the banking hall are in fibrous plaster, decorated a pale stone colour. The staircase approaches and corridors have rubber-paved floors, French stuc walls, and bronze metal balustrades. The entrance hall has stained glass windows designed by Mr. A. J. Dix.

LETTERS FROM READERS

W. HARDING THOMPSON, F.R.I.B.A., M.T.P.I.

MAJOR HARRY BARNES, F.R.I.B.A.
(Chairman, Architects' Registration Council)

PHILIP H. MASSEY, B.Sc. (Econ), F.R.Econ.S.

C. S. L. THURGOOD

NATHANIEL LLOYD, O.B.E., F.S.A., F.R.I.B.A.

J. G. MARTIN
(Secretary, National Housing and Town Planning Council)

S. I. LEVY, M.A., Ph.D., F.I.C.

The Town and Country Planning Act

SIR,—Captain Finlay's letter in your issue for December 7 is of interest as indicating the attitude of some people to a constructive measure passed by a conservative Government. It is unlikely that such a Government, which contains a large number of important landowners, would be likely to approve a measure which would give powers to so-called "busybodies throughout the land to put their fingers into the unfortunate landowners' pie." Nor is it correct to label the statute as "an ill-starred and unpopular Act," although it certainly helps to prevent the unscrupulous individual from exploiting land to the detriment of the community.

There are unfortunately still to be found persons who have not yet abandoned the attitude of nineteenth-century *laisser-faire* which caused the confusion we are in today. Without co-operative efforts in land planning that confusion will become steadily worse in a materialistic age. The main object of the Act is to ensure *co-operation* through the existing machinery of local government, guided by the centralized authority of the State.

There is little fear that Town Planning Authorities will abuse the privilege of their powers. On the contrary, experience proves that they welcome any well-considered proposals put forward by individuals for land development or building which do not damage a neighbourhood. The Act contains ample safeguards for the protection of individuals against any possible autocratic control by a Local Authority. These are :

(1) The Minister of Health must approve the area to be planned, which must be suitable.

(2) The Preliminary Statement of proposals must be approved by the Minister, who is thus given control at an intermediate stage.

(3) The Draft Scheme and also the Final Scheme must be likewise approved by the Minister.

(4) At every stage of the scheme, owners may lodge an objection, and, if it is found valid at a public inquiry, the Minister can order the planning scheme to be modified.

(5) Landowners can prepare their own planning schemes and have them adopted by a planning authority.

(6) No planning authority is empowered to regulate the siting and external appearance of buildings unless an adequate machinery is set up for an appeal by an aggrieved person to a properly constituted Tribunal or Court.

(7) Finally, after approval by the Minister, a scheme still has to pass through both Houses of Parliament before it has the force of an Act.

I believe that it is generally agreed that if we have to wait for improvement in public taste in architectural matters before imposing the regulation of land development and building, the wastage of good land and damage to town and countryside will be past repair. In the meantime it is within the qualified architects' province to give the lead in regard to the quality of contemporary design, but it must be remembered that architects are only responsible for about 5 per cent. of domestic buildings.

W. HARDING THOMPSON

Slum

SIR,—I have read Mr. Massey's review of Sir E. D. Simons' book in your JOURNAL. We are indebted to both gentlemen. Mr. Massey for the extraordinarily valuable work in the investigation of the slum problem which he has recently undertaken, and carried through, with such signal success. Sir E. D. Simon for an admirable, and concise, exposition of housing action since the war, which cannot be too highly commended to your readers.

I write this because I think Mr. Massey is under a wrong impression as to the "one house, one family" objective. It comes, I expect, from the ambiguous character of the term "house."

It does not mean in this connection a building which from site to roof is occupied by only one family; if it did, it would justify Mr. Massey's criticism of it in relation to the London Housing Problem.

What it does mean is a "structurally separate dwelling" many of which may be provided in one building with separate "front doors" though these may open on a common stair case and not on the street.

I sincerely hope that we are not going to enter into another of those unfortunate controversies which divide housing reformers and delay the progress all want. Don't let us add another antithesis to those which unhappily already exist—high buildings versus cottages, garden cities versus central re-housing. If we are now to have a conflict between "overcrowding by rooms," and "overcrowding by families" it is an unhappy mischance.

I am bound in fairness to Mr. Massey to say that I think the one defect in Sir E. D. Simon's otherwise excellent book is that in its depreciation of slum clearance it tends to provoke the criticism Mr. Massey makes. I can agree with Mr. Massey that slum clearance cannot be postponed until we get the "one house, one family" ideal realized, and yet think that the true approach to housing is by way of the need of the family and not the physical condition of the house. The final test of a successful housing policy will be, not the number of physically unfit houses we have replaced, but the number of families that lack a "structurally separate dwelling" with a separate front door (whatever it opens on) on their side of which they have all the amenities needed in decent family life for their exclusive use and enjoyment.

HARRY BARNES

[*We have submitted the above letter to Mr. Philip Massey, who sends the following reply.—Ed. A.J.*]

SIR,—I can assure Major Barnes that I am under no misapprehension as to Sir Ernest Simon's use of the word "house" as meaning "structurally separate dwelling." Having carefully defined "structurally separate dwelling" and explained that the word "house" might mean different things in different contexts, I employed the same term in my own survey.

Sir Ernest Simon takes the number of structurally separate dwellings and the number of families, and makes the difference a measurement of housing shortage. He does not, therefore, include, let us say, Wolseley Buildings, Bermondsey, as an area in which abatement of overcrowding is needed; though the buildings average 2½ to the room. But he suggests that in a five-storey house, not structurally divided, let to five families, however small, the inhabitants need four more dwellings.

In such houses, reconditioning, by making the so-called "flats" structurally separate, is impracticable, because there is not room for a bathroom on each floor. There is, indeed, no particular advantage in closing up one of two doors leading off a landing and making a door between the two rooms instead.

It is impracticable to suggest a plan to relieve "overcrowding" which will leave eight or ten people in one or two rooms because they are structurally separated from their neighbours, and which suggests that eight or ten people in a five-storey house, not structurally divided, need four more houses. To urge that the former need the attention of society and that the latter do not can hardly be called entering into an "unfortunate controversy." It is a matter of some importance to the families concerned.

PHILIP H. MASSEY

Fixing Rain-water Pipe Over Tile-hung Walls

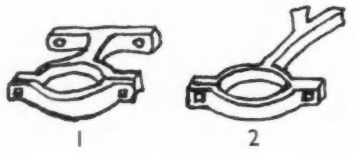
SIR,—I find myself unable to agree with your correspondent, E. G., as to the method of fixing the above, which he recommends in your *Questions That Arise* column. The best way is to make a "tile" of oak or teak, with two copper strips screwed to back to prevent splitting (the nail holes passing through upper strip) and screw the ears to this wood "tile" with or without distance pieces as required.

If the wood "tile" is painted the same colour as the tiles, varnished and dusted with tile dust, it will never be noticed, as it is nearly all hidden by the rain-water pipe. The wood tile should be fixed with two brass screws.

C. S. L. THURGOOD

E. G. replies :—Your correspondent's suggestion seems a good one, which I shall adopt experimentally on work which I now have in hand; but it strikes me as a bit fidgety and likely to cause some trouble in getting it done, as it involves the joiner, plumber and painter in this one small operation.

SIR,—Another, and I think a better, method of fixing rain-water pipes over tile-hung walls is by means of holderbats. These are made, as in Fig. 1, to be pinned to the joints of the brickwork after building, but before tile-hanging. A still better way is to use holderbats with fangs, as in Fig. 2, built in as the brickwork goes up. With these no question arises of using wood pads where the joints will not hold pins securely; but, of course, the exact positions of the pipes and holderbats must be settled early. In each type, the projection of the shank from the brickwork should be 4 ins., so that the ring will be clear of the wall-tiling. This will keep the pipes clear of the wall-tiling sufficiently to permit of periodic painting. The rings are in two halves and are bolted round the pipes. Two snips with a pair of pincers are sufficient to notch tiles round the holderbats, as the tile hanging proceeds. The holderbats must be tarred or painted before fixing or tile hanging. The use of wood blocks should be avoided where possible, because of their liability to shrink, and so become loose.



NATHANIEL LLOYD

Reorganizing London

SIR,—May I warmly support the trenchant letter by Major H. L. Nathan, M.P., which appeared in your issue for November 23, calling attention to the many complex housing and planning problems with which London is faced?

The Report of the Census of 1931 shows an alarming state of affairs, inasmuch as only 730,628 structurally separate dwellings were available for 1,190,030 private families in the County of London—a net shortage of 459,402 dwellings on the basis of one house per family.

Now that the Wheatley Housing Scheme has been terminated, there will shortly be no agency in the Greater London region providing good standard dwellings at rents within the means of the lower paid wage-earners.

So far, private builders have shown no readiness to build houses to let under the guarantee scheme of the new Housing Act. Consequently, overcrowding throughout the region will tend to increase rather than diminish.

As regards planning, the time is certainly long overdue for a plan for the reorganization and development of London. If, as is foreshadowed by the Minister of Health's recent statement in Parliament, the London County Council are to displace 250,000 persons from unhealthy areas within the next ten years, it is surely of importance that their clearance and rehousing operations should be properly co-ordinated with the needs of industry and transport.

London has grown by intensive and haphazard local development, and many enlightened planners believe that some portions of its growth will have to be decentralized into satellite towns.

In view of the momentous changes since the war, London must be reorganized, and serious efforts for replanning the congested inner ring of boroughs should be commenced without delay. Major Nathan has rendered a public service in calling attention to these vital problems.

JOHN G. MARTIN

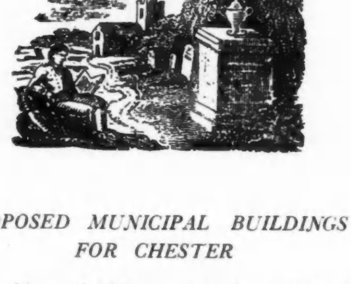
Standardization of Electric Fittings

SIR,—In reply to Mr. C. R. Taylor, whose letter was published in your columns last week, may I point out that for some years past the British Standards Institution has issued specifications for the dimensions and type of electric plugs and sockets for domestic use.

Moreover, all leading electrical manufacturers in this country now make all varieties of plugs and sockets to these British Standard sizes. Broadly speaking, there are only two different sizes; the smaller, rated at 5 amperes current carrying capacity, being suitable for portable lamps, irons, kettles, toasters and other small appliances, and the larger size, rated at 15 amperes current carrying capacity, being suitable for electric fires. With use of a simple adaptor, a small plug can be plugged into a large socket.

Standardization in the electrical industry in this country has, in fact, made more progress than your correspondent seems to be aware of. Appliances and fittings bought for one locality can quite generally be used in others.

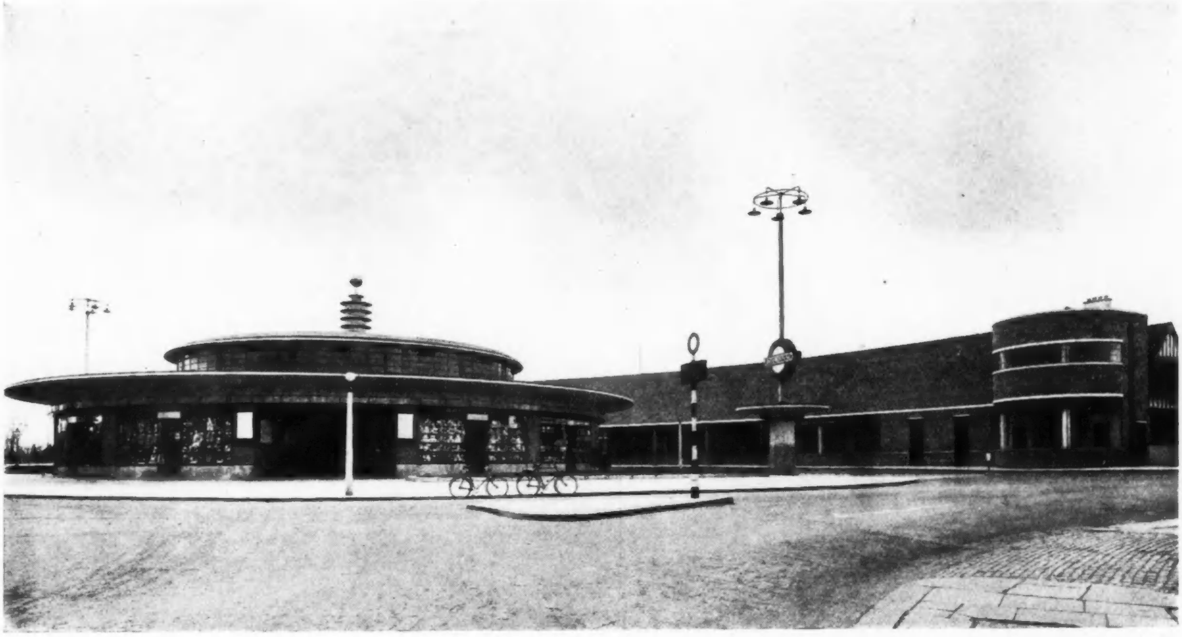
S. I. LEVY



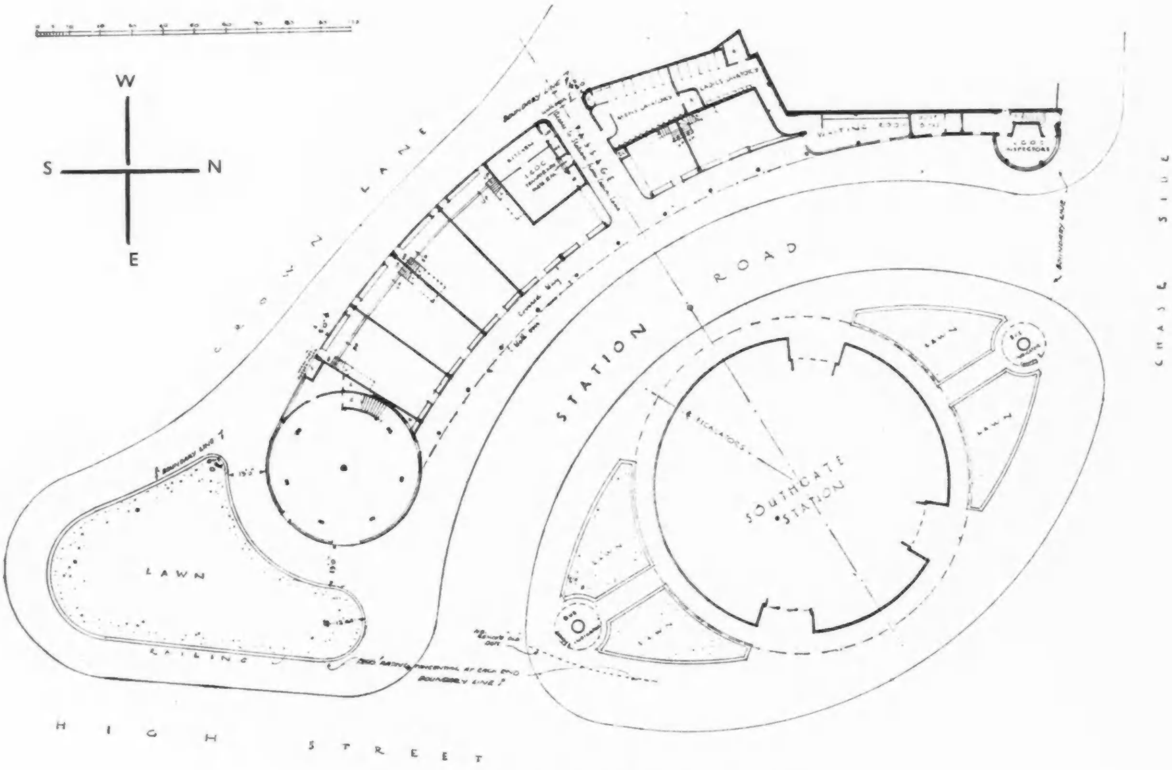
PROPOSED MUNICIPAL BUILDINGS FOR CHESTER

The Chesterfield Corporation have applied to the Ministry of Health for sanction to borrow £124,500 for the erection of municipal buildings. The Ministry have directed a public inquiry to be held into the application today, December 14.

SHOPPING CENTRE AT SOUTHGATE



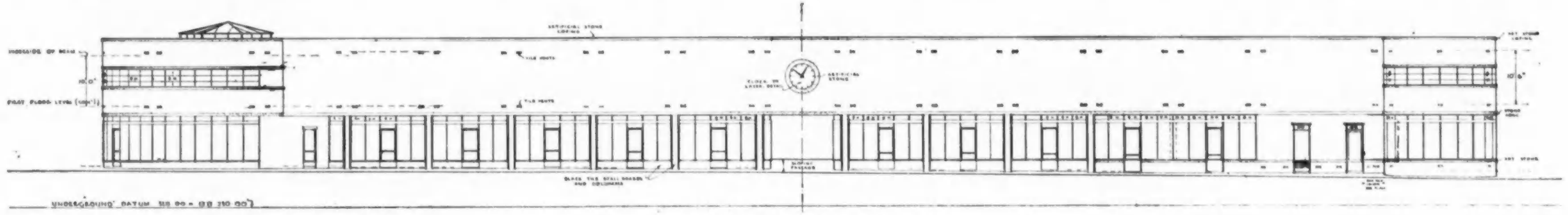
The shopping centre (right) shown in its relationship with the underground station and omnibus stopping-place, designed by the same architects.


W
S
N
E
CROWN LANE
PASSAGE
WAITING ROOM
STATION ROAD
CHASE SIDE
LAWN
LAWN
LAWN
LAWN
LAWN
SOUTHGATE STATION
ESCALATORS
BOUNDARY LINE
RAILING
HIGH STREET

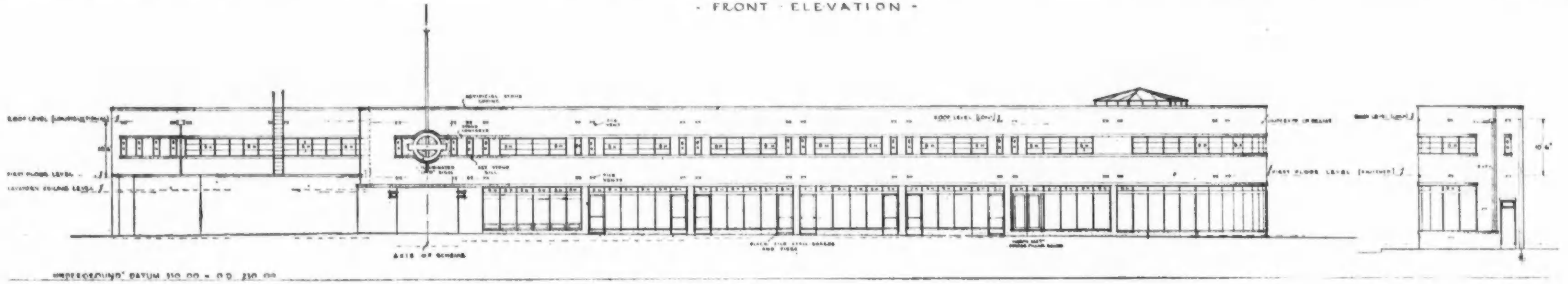
LAY-OUT PLAN (ground floor level).

DESIGNED BY ADAMS, HOLDEN AND PEARSON

SHOPPING CENTRE AT SOUTHGATE

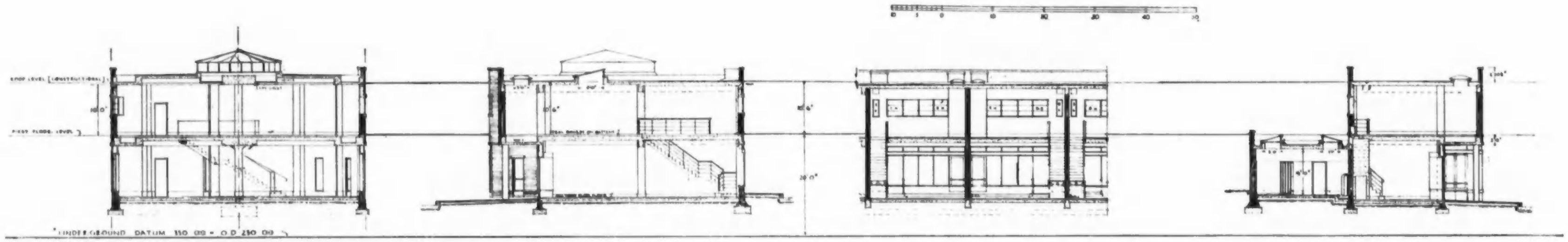

ARTIFICIAL STONE COPING
TILE VENTS
UNDERSIDE OF BEAM
FIRST FLOOR LEVEL
10' 0"
10' 6"
ARTIFICIAL STONE
UNDERGROUND DATUM 110.00 = O.D. 210.00

- FRONT · ELEVATION -


UNDERGROUND DATUM 110.00 = O.D. 210.00
10' 6"

· BACK ELEVATION ·

ELEVATION FROM CHASE SIDE

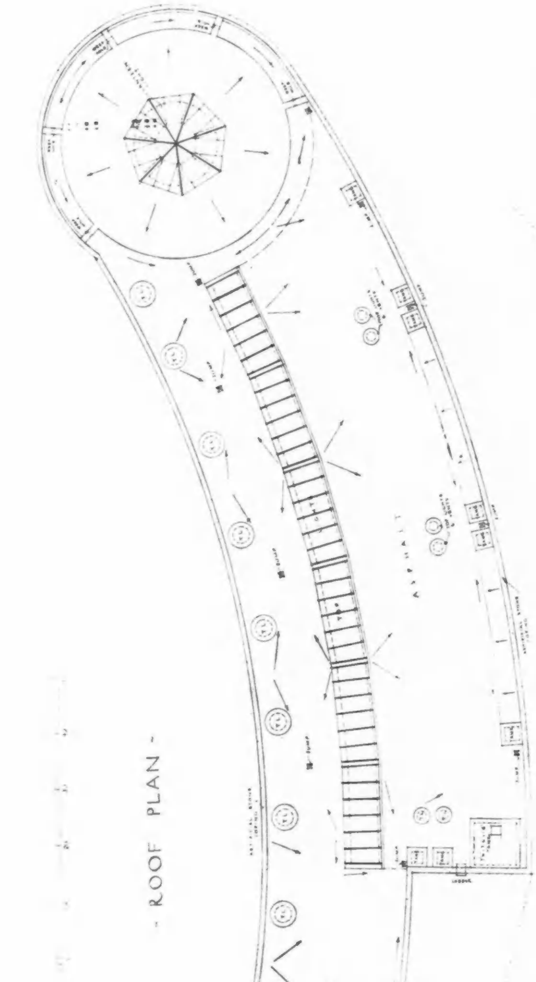

FIRST FLOOR LEVEL
10' 0"
10' 6"
UNDERGROUND DATUM 110.00 = O.D. 210.00

The Shopping Centre at the corner of High Street and Chase Side, Southgate, forms part of a unified scheme on a common axial line with the circular Station building recently carried out by the same architects, and illustrated in our issue for April 26, 1933. It is the only one so far completed of four such schemes projected in conjunction with the series of stations of the Piccadilly line extension of the Underground railway, the others being at Turnpike Lane, Enfield West and Cockfosters.

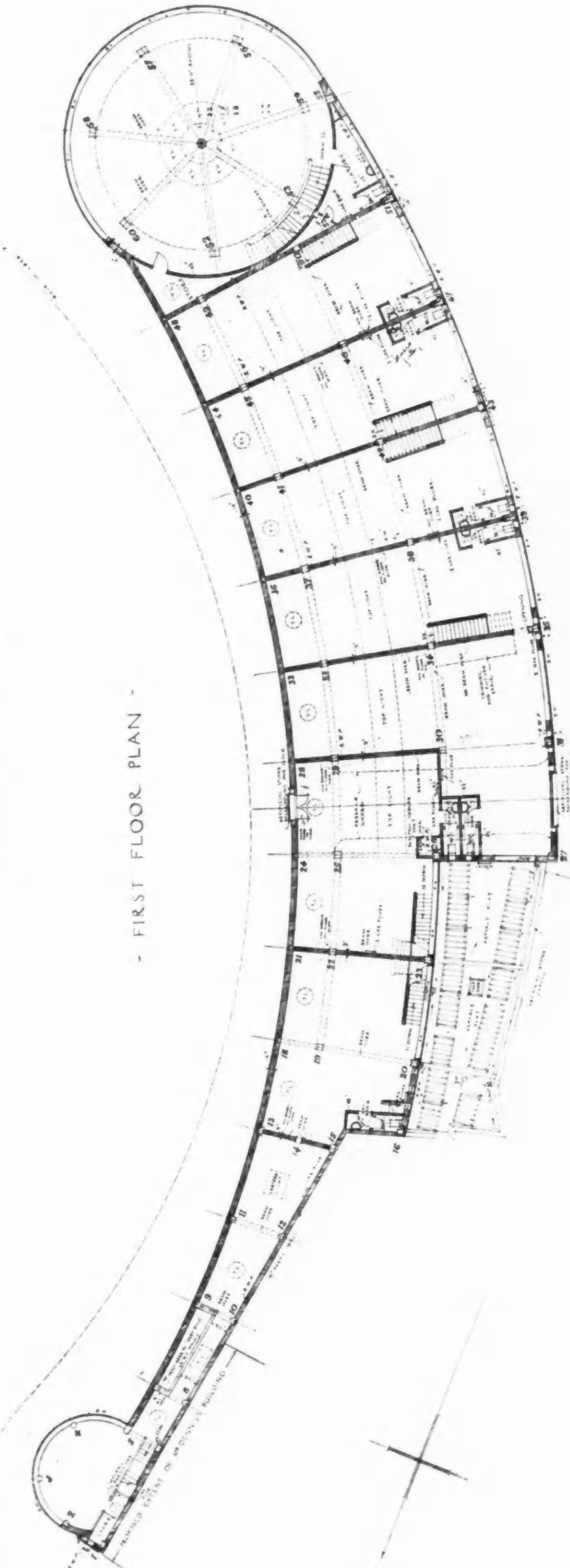
The shops are arranged with one frontage to the new bus draw-in road between them and the station, and another to a new diversion of the existing Crown Lane which is now to be widened to give access to the newly developed area on the south of Chase Side.

The north wing of the building is for L.P.T.B. use, and includes omnibus inspectors' office and an omnibus waiting room. A section of the site is allotted to public lavatories for the general public as well as L.P.T.B. passengers, and the rest of the block to shops. The building has a reinforced concrete frame with Portland stone aggregate for the exposed beams and cills, the concrete itself being the finished face, without rendering. The external brickwork is in Buckinghamshire multi-coloured facings in stretching bond where it is merely 4½ ins. facing, and in St. Andrew's bond for the actual walling between beams.

Above are the two elevations, and cross sections at four points. Below are first floor and roof plans. For arrangement of ground floor, see lay-out plan on page 761.



- ROOF PLAN -



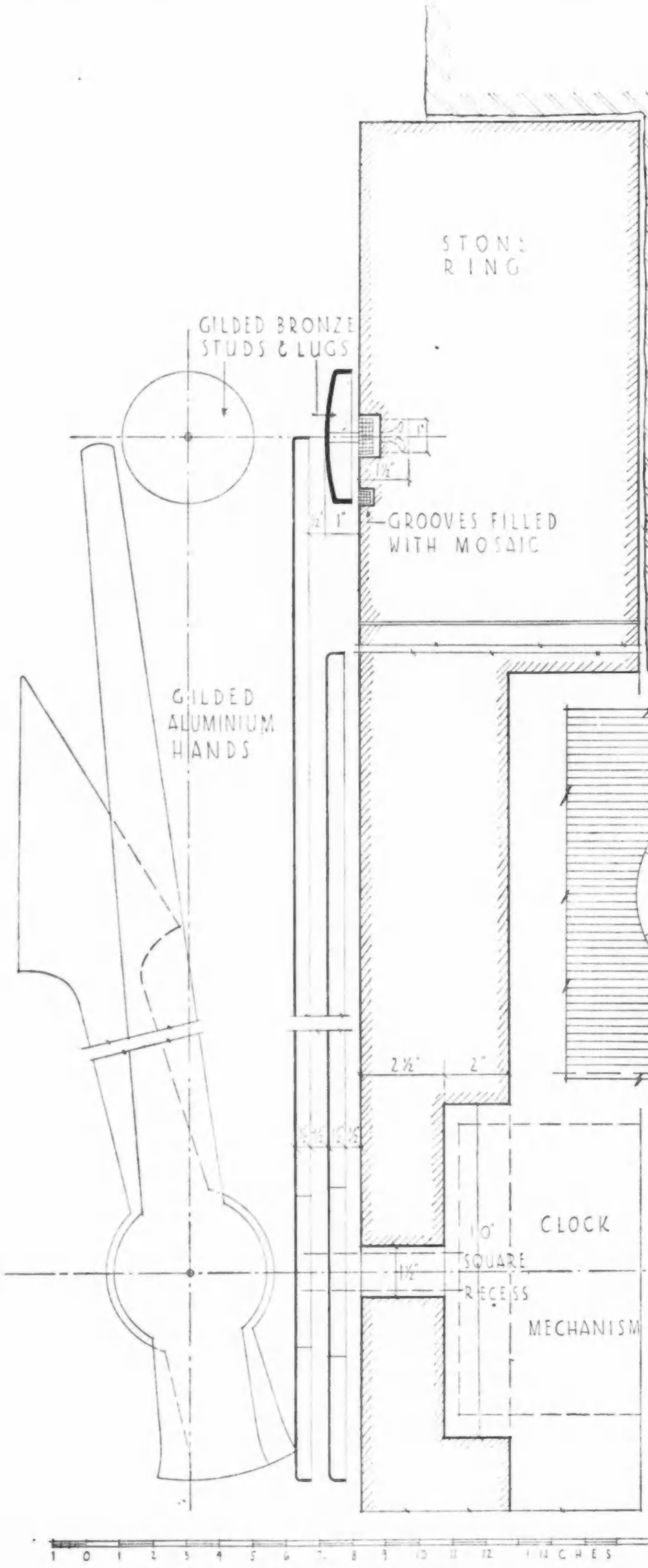
- FIRST FLOOR PLAN -

DESIGNED BY ADAMS, HOLDEN AND PEARSON

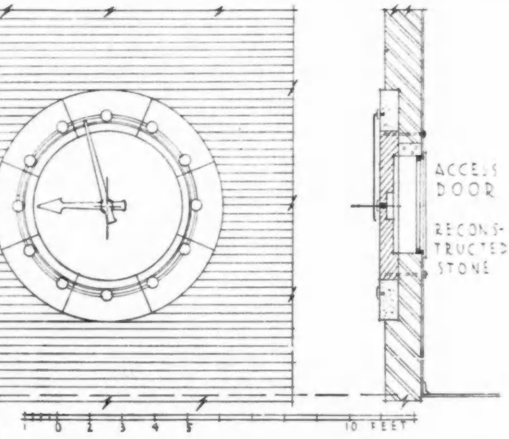
D

SHOPPING CENTRE AT SOUTHGATE:

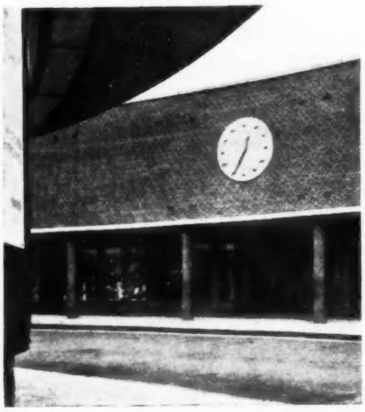
Details of the clock which forms the central feature of the curved front. The lower part of this front is an arcade giving access to the shops and the omnibus waiting room. Behind the blank wall into which the clock is set are top-lit storage rooms in connection with the shops below.


STONE RING
GILDED BRONZE STUDS & LUGS
2"×3/8 FRAMED STRAP
1/2" BOLT
1"
1½"
½" 1"
GROOVES FILLED WITH MOSAIC
9" BRICK
GILDED ALUMINIUM HANDS
2½"
2"
1'0" SQUARE RECESS
1½"
CLOCK MECHANISM
℄
1 0 1 2 3 4 5 6 7 8 9 10 11 12 INCHES

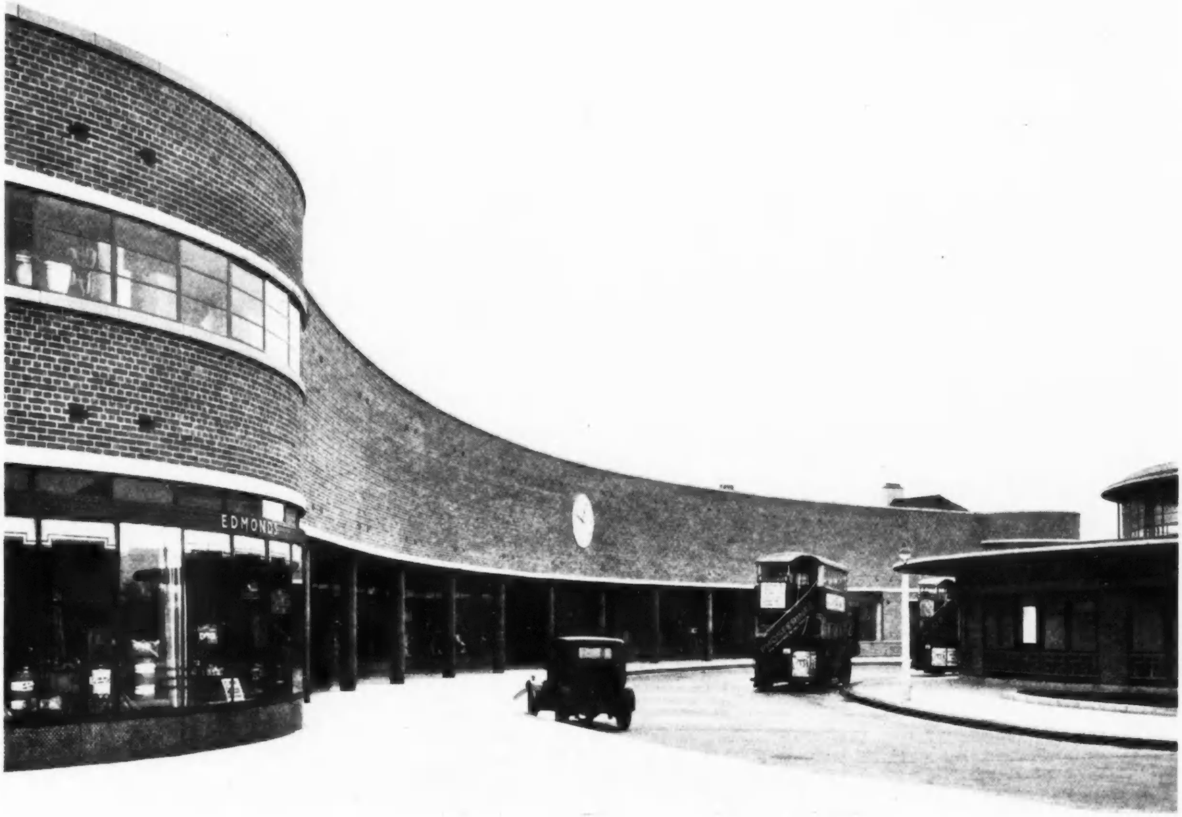
SECTION THROUGH CLOCK


ACCESS DOOR
RECONSTRUCTED STONE
1 0 2 3 4 5 10 FEET

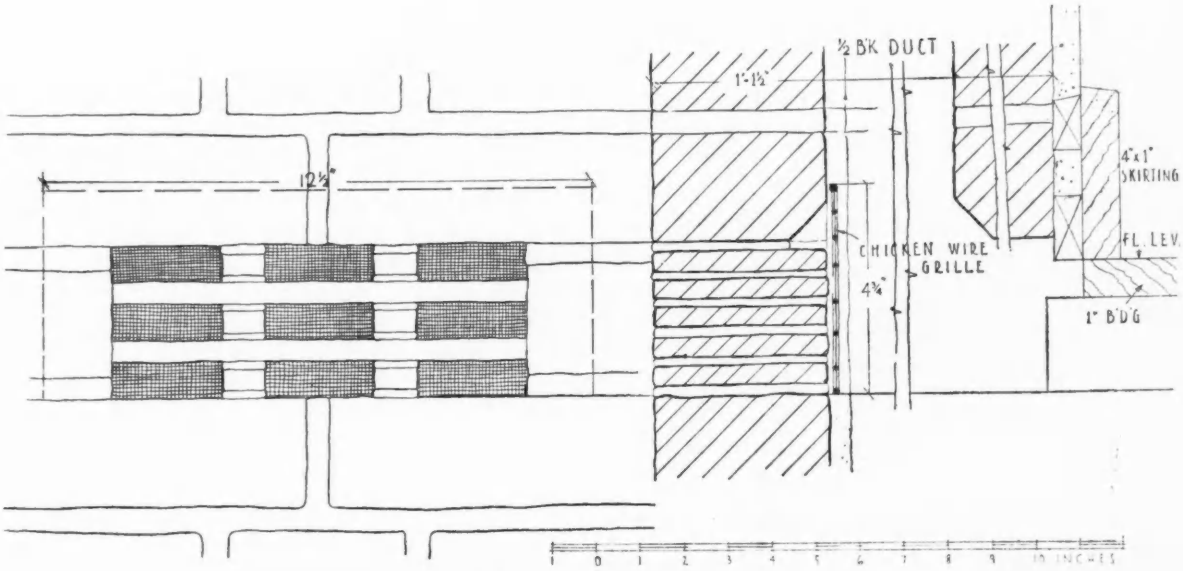
KEY ELEVATION AND SECTION OF CLOCK



BY ADAMS, HOLDEN AND PEARSON

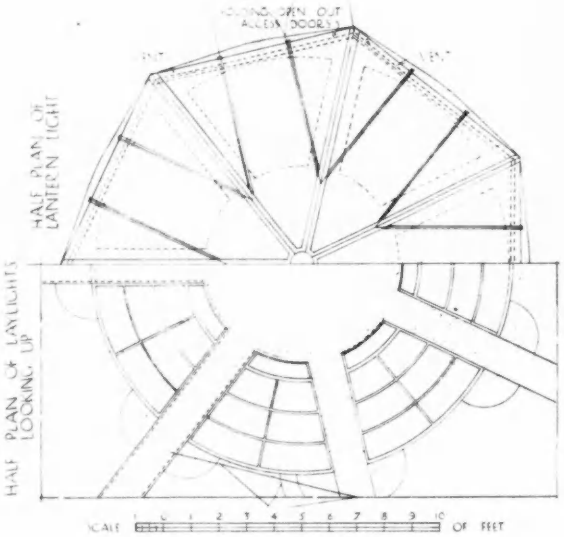


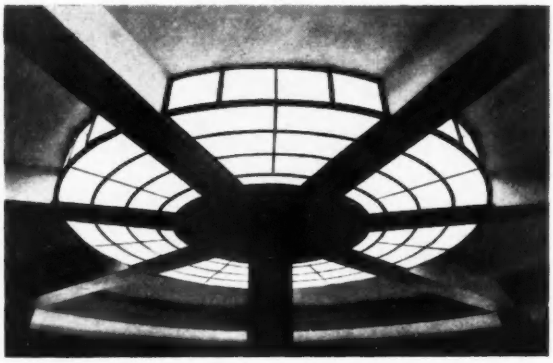
Above: The main front of the shopping centre looking along Station Road, with the underground station on the right. The shop fronts, of which constructional details are given overleaf, are in bronze. Below: A detail drawing of the tile vents at first floor and roof level, which can be seen in the photograph.

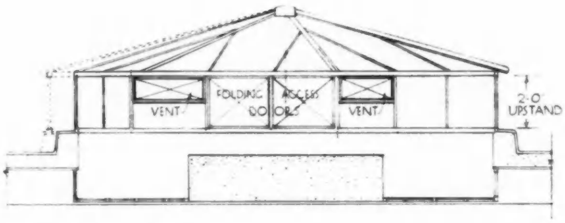

12½"
1'-1½"
½ B'K DUCT
4"x1" SKIRTING
FL. LEV.
CHICKEN WIRE GRILLE
4¾"
1" B'D'G
1 0 1 2 3 4 5 6 7 8 9 10 INCHES

THE TILE VENTS

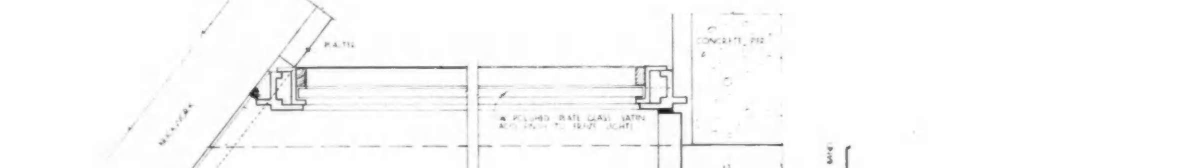
SHOPPING CENTRE AT SOUTHGATE:


FOLDING OPEN OUT ACCESS DOORS
VENT
VENT
HALF PLAN OF LANTERN LIGHT
HALF PLAN OF LAYLIGHTS LOOKING UP
SCALE 1 0 1 2 3 4 5 6 7 8 9 10 OF FEET




VENT
FOLDING ACCESS DOORS
VENT
2-0 UPSTAND

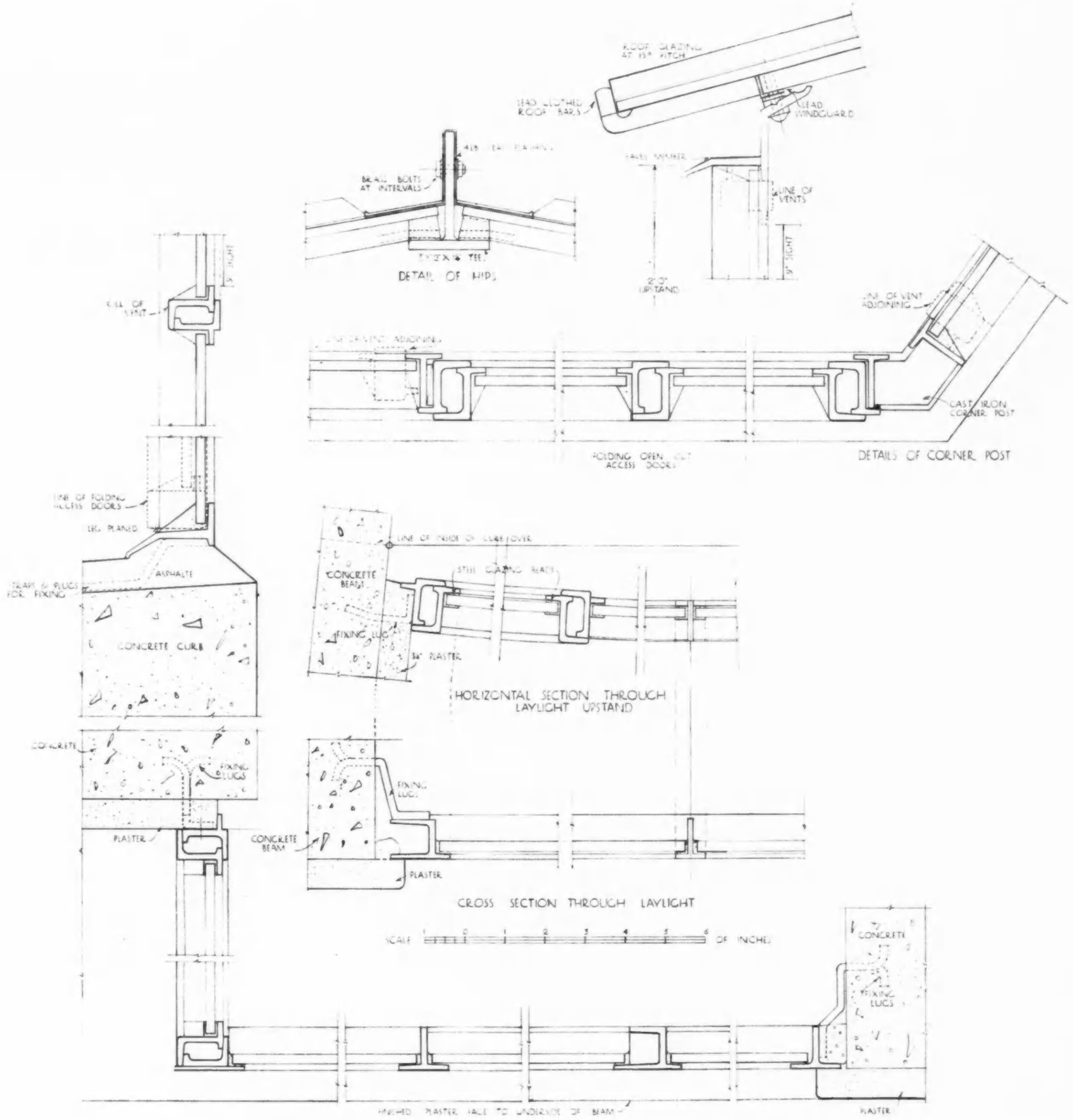
LAY-LIGHT AND LANTERN LIGHT.


PLASTER
CONCRETE PIER
POLISHED PLATE GLASS SATIN FINISH TO FRIEZE LIGHTS
TILING
SHOPFRONT UNDER
FACIA BAND
POLISHED PLATE GLASS SATIN FINISH TO FRIEZE LIGHTS
FRIEZE LIGHTS IN FACETS
FACIA BAND CURVED TO RADIUS
CONCEALED ARMS & SPRING CATCH FOR LONG ARM TO VENTS
POLISHED PLATE GLASS SHOPFRONT
SHOPFRONT IN FACETS
OUTWARD OPENING
FINISHED FLOOR LEVEL
ELEVATION ADJOINING CIRCULAR SHOWROOM
SHOP ELEVATION
SCALE OF FEET
SECTION
LINE OF FASCIA BAND OVER CURVED TO RADIUS
PLAN
PLAN
FASCIA BAND
POLISHED PLATE GLASS
BRONZE VENTILATING GRILLE
WINDOW BOARD
CAST BRONZE SILL BAND
ANGLE CLEATS AT LONG 2 TO EACH PANE
VERTICAL MEMBERS TO RETURN UNDER FRONTS THUS
GAUZE IN BRONZE SOLDERED TO CASTING
BRONZE GAUZE CONTINUOUS
CONTINUOUS FLAT
TILING
LUG
PLUG
BRICK DWARF WALL
CONCRETE PIER
WOOD LINING
SCALE OF INCHES
WOOD LINING
TILING
TILING
HARDWOOD BEAD
BRONZE BEAD TO STIFFEN HANGING SIDE OF FRAME WOOD BEADS ELSEWHERE EXCEPT TO DOOR (BRONZE BEADS TO DOOR)
MASTIC POINTING
CONCEALED
CONTINUOUS BUTT FULL HEIGHT OF VENT

SECTIONAL PLAN OF SHOWCASE DOOR

DETAILS OF SHOP-FRONTS.

BY ADAMS, HOLDEN AND PEARSON


ROOF GLAZING AT 15° PITCH
LEAD CLOTHED ROOF BARS
LEAD WINDGUARD
EAVES MEMBER
LINE OF VENTS
9" SIGHT
2' 0" UPSTAND
BRASS BOLTS AT INTERVALS
4 LB LEAD FLASHING
DETAIL OF HIPS
SILL OF VENT
LINE OF VENT ADJOINING
CAST IRON CORNER POST
FOLDING OPEN OUT ACCESS DOORS
DETAILS OF CORNER POST
LINE OF FOLDING ACCESS DOORS
LEG PLANED
ASPHALTE
STRAPS & PLUGS FOR FIXING
CONCRETE CURB
CONCRETE
FIXING LUGS
PLASTER
LINE OF INSIDE OF CURB OVER
CONCRETE BEAM
STEEL GLAZING BEADS
FIXING LUG
3/4" PLASTER
HORIZONTAL SECTION THROUGH LAYLIGHT UPSTAND
CONCRETE BEAM
FIXING LUGS
PLASTER
CROSS SECTION THROUGH LAYLIGHT
SCALE 1 0 1 2 3 4 5 6 OF INCHES
CONCRETE
FIXING LUGS
FINISHED PLASTER FACE TO UNDERSIDE OF BEAM
PLASTER

LAY-LIGHT AND LANTERN LIGHT: DETAILS.

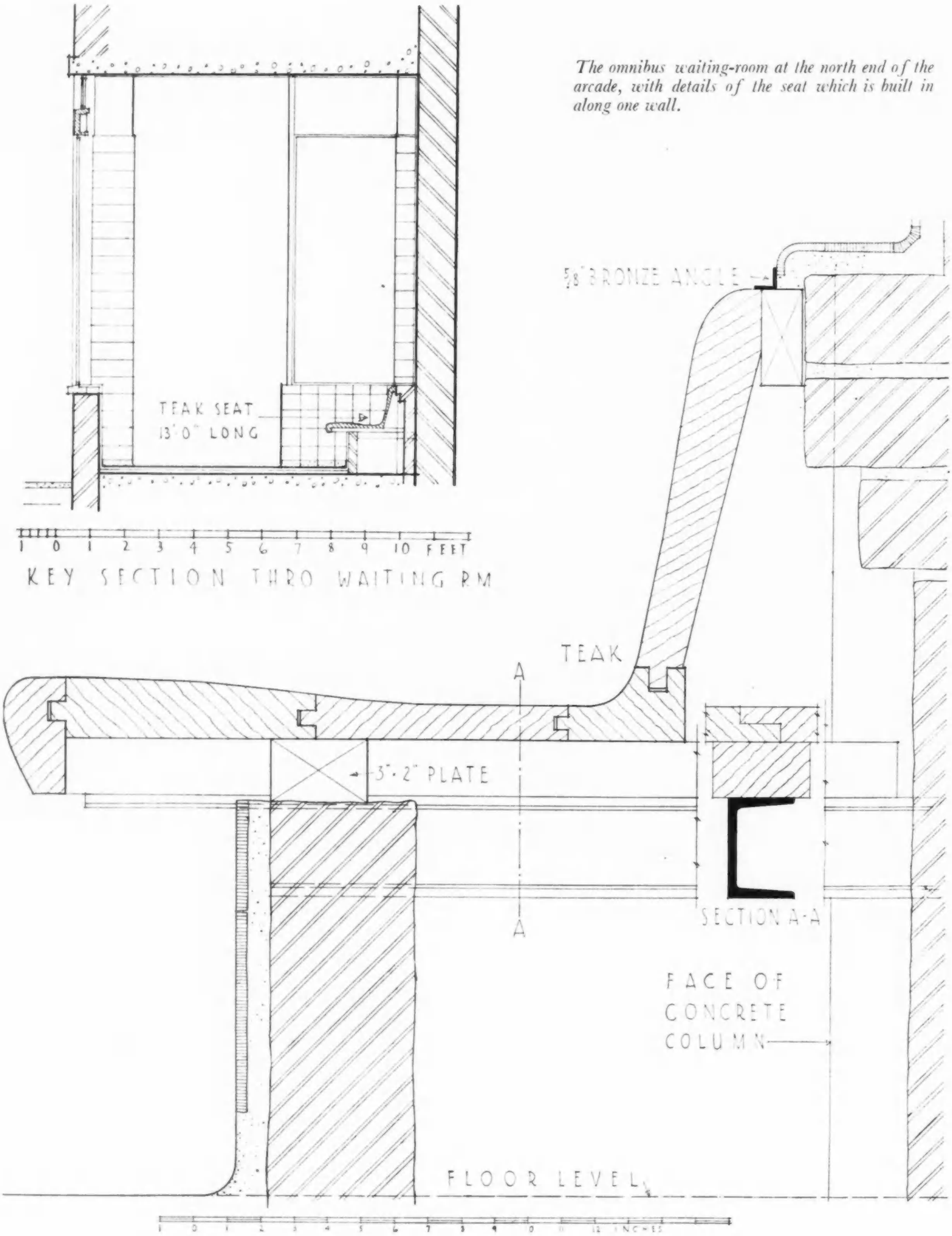
On the lower half of the facing page are shown elevation and section of the bronze shop-fronts, with typical details.

On the upper half are plan and section of the lay-light and lantern light in the roof of the circular portion at the eastern end of the building; also a photograph of the lay-light from the inside.

On this page are details of the same lay-light and lantern light.

SHOPPING CENTRE AT SOUTHGATE:

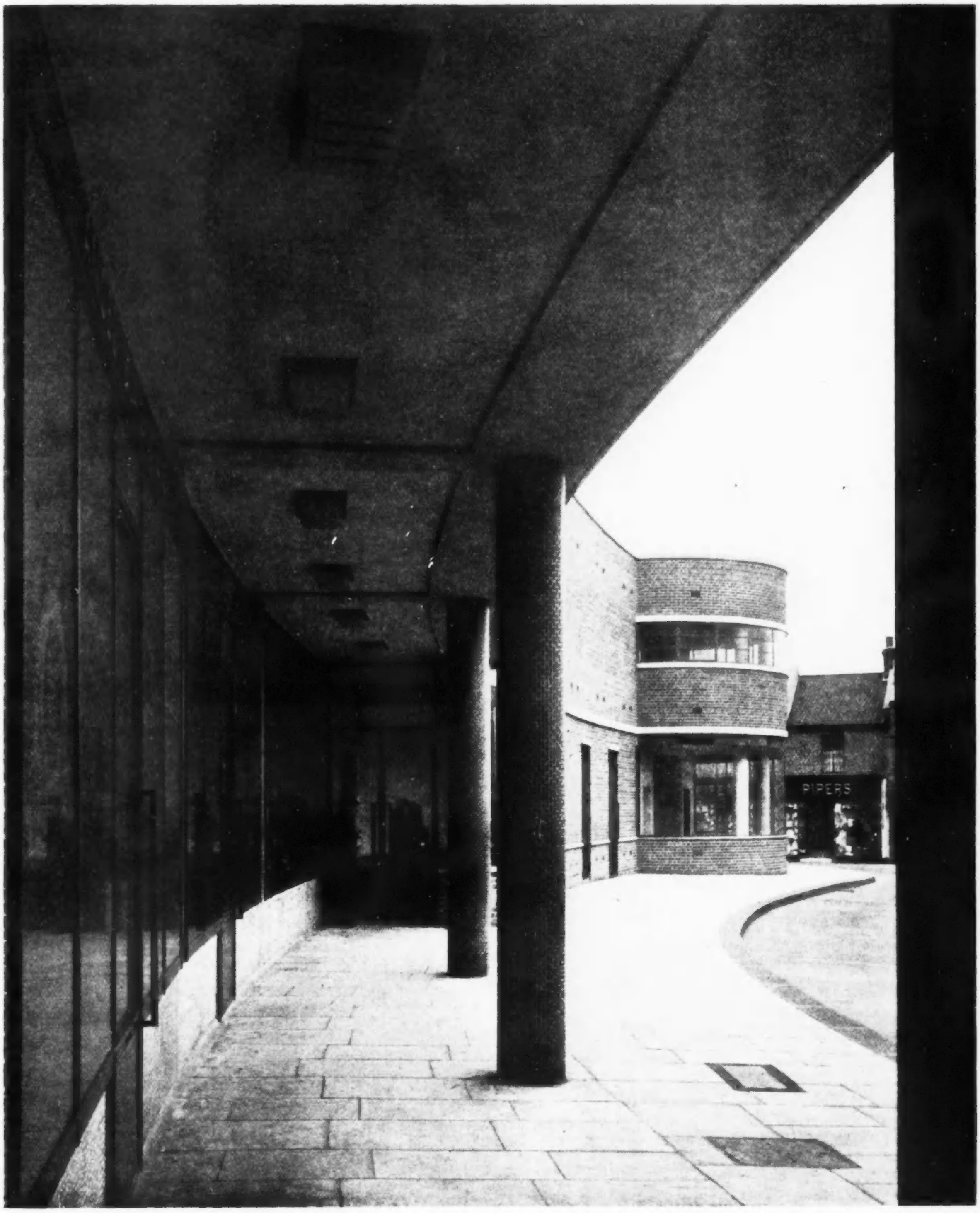
The omnibus waiting-room at the north end of the arcade, with details of the seat which is built in along one wall.


TEAK SEAT
13'0" LONG
1 0 1 2 3 4 5 6 7 8 9 10 FEET
5/8" BRONZE ANGLE
TEAK
A
3"×2" PLATE
A
SECTION A-A
FACE OF CONCRETE COLUMN
FLOOR LEVEL
1 0 1 2 3 4 5 6 7 8 9 10 11 12 INCHES

KEY SECTION THRO WAITING RM

SECTION THROUGH WAITING ROOM SEAT

BY ADAMS, HOLDEN AND PEARSON



A view looking along the colonnade with shop windows on the left and the entrance to the omnibus waiting room at the far end. The circular portion on the right contains the omnibus inspectors' office. The columns, stall-boards and pilasters are faced with mosaic in black Belgian marble, the shopfronts being in bronze.

SOCIETIES AND INSTITUTIONS

THE HOUSING OF THE FUTURE

The Hon. Humphrey A. Pakington, F.R.I.B.A., in delivering the fifth of a series of public lectures on the Housing Problem, organized by the Architectural Association, and held at 36 Bedford Square, W.C.1, on Saturday last, said :—

" I see the town of the future as a manageable unit of ten thousand inhabitants, housed in twenty blocks of some three or four storeys in height. These blocks will be of a semi-permanent nature, easily re-planned or removed to meet new needs. Each block will be a potted village of five hundred inhabitants, with its own health centre and co-operative stores The industrial portions of the town will be segregated from the residential, and the rabbit-warrens which now exist behind our street-frontages will be a nightmare of the past, for each block will be on an island site, with spacious courtyards open for all to see. The skyscraper is a valuable remedy for bad planning, but should be not necessary in a planned world."

LIVERPOOL ARCHITECTURAL SOCIETY

In the absence, through illness, of Mr. Norman Henshaw, who was to have lectured recently to the above Society on " The Relationship of Organization and Cost," Mr. T. E. Eccles, F.R.I.B.A., at very short notice, gave a talk on Sweden, which he toured in September.

Mr. Eccles described the scenery, art, architecture and general life of the towns and districts through which he travelled. His lecture was accompanied by a number of slides, made from his own photographs.

SCOTTISH ARCHITECTS

At a recent meeting of the Council of the Royal Incorporation of Architects in Scotland, held at Edinburgh, the following associate-members were elected : Messrs. G. F. Taylor, S. Clink, James Bunyan, A. J. Ridley, C. H. F. Nimmo, M. S. Turpie, W. E. Bourne and J. L. Bourne.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

Mr. B. R. Gribbon, F.R.I.B.A. (president) occupied the chair at a meeting of the above Society, held on November 30, at the Harrogate Technical College, when a lecture on " Domestic Lighting " was given by Mr. Waldo Maitland, A.R.I.B.A.

The lecturer said that two classes of homes existed : first, those where the occupant was unknown to the architect. Here arose the necessity for flexibility in the arrangements, as the occupier would naturally exercise his own tastes. Facilities should therefore be provided which would enable the occupant to have a free hand to satisfy his own needs ; and adequate provision in the way of lighting plugs should be installed. The other case was where the client or occupier was in touch with the architect who could more fully express the former's needs. The possibility of built-in lighting was more likely when working direct for a client, and presented a better chance of harmony and suitability in the fittings.

FIVE COUNTIES ARCHITECTURAL ASSOCIATION

A meeting of the Birmingham and Five Counties Architectural Association was held in Birmingham on December 1 when an address on the Royal Hospital School, Holbrook, Suffolk, was given by Mr. William Haywood, F.R.I.B.A., of Messrs. Buckland and Haywood, the architects of the school.

THE WELSH SCHOOL OF ARCHITECTURE

Some 270 architects and students of architecture and their friends were present at the annual dance of the Welsh School of Architecture, Cardiff, on November 25.

The students of the School designed and carried out a scheme of decoration for the Assembly Hall of the College in which the dance was held.

SOUTH WALES ARCHITECTS' AND BUILDERS' MEETING

Under the auspices of the South Wales Institute of Architects (Central Branch) and the Institute of Builders (South Wales Branch), a lantern lecture on " Places of Recreation " was given by Mr. J. Murray Easton, F.R.I.B.A., at Cardiff on November 30.

Mr. Easton said that England had, on balance, no cause to be ashamed of its facilities for sport. On the Continent this was a relatively recent development, but there the problem had been more scientifically tackled, and we had undoubtedly much to learn from what had been done there. Nothing could illustrate this thoroughness more than the Berlin Sportsforum, an institute recently formed for the purpose of training teachers in gymnastics and athletics. " Not far from the Sportsforum, on the largest of the lakes, is the new bathing centre at Wansee. It is true that it is not to everyone's taste to be in such crowds, but the advantage of a large and attractively-equipped centre of this sort is that it prevents the lake shore in general from being disfigured by patchy eruptions of those small bathing huts which so disfigure the South coast of England "

A vote of thanks to the lecturer was proposed and seconded by Messrs. Percy Thomas, O.B.E., F.R.I B.A., and Ald. R. G. Hill Snook, J.P.

FACULTY OF ARCHITECTS AND SURVEYORS

The seventh annual dinner of the Faculty of Architects and Surveyors was held at the Hotel Metropole, W.C.2, on December 8. Sir Charles C. Allom, F.R.S.A. (President), occupied the chair.

Sir William Rothenstein, Principal of the Royal College of Art, proposing the toast of the Association, made special reference to mural decoration. He said that the chances given to mural decorators were very few. Not many people knew what had been done in London, but what had been done was extremely good. A short time ago he took Mr. Max Beerbohm to see the mural decorations at Morley College, the work of three painters, which were among the best that had been done in London. Mr. Beerbohm had said that if they had been done in France, large numbers of people would have flocked to see them. Sir William suggested that one method of employing mural decorators would be to allow them to make the walls of the waiting rooms of our hospitals more cheerful.

Sir Charles Allom responded.

Other speakers included Sir William Arbuthnot Lane, Lady Kinlock-Cooke, Messrs W. G. Percy, F.F.A.S., and E. S. Andrews, B.SC. Among those present were Sir George MacLaren Brown and Lady Brown ; Major Harry Barnes, F.R.I.B.A., and Mrs. Barnes ; Messrs. H. C. Adams, M.INST.C.E. ; E. G. Lynde and E. J. Michaux (vice-presidents) ; and H. B. Whitfield (secretary).

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS

Sir Edwin Lutyens, R.A. (President), occupied the chair at the annual dinner of the Incorporated Association of Architects and Surveyors, held at Claridge's Hotel, W., on Friday last.

The Bishop of Norwich (Dr. Pollock), proposing the toast of the Association, referred to the preservation of the countryside. He said :—

" I believe it rests with architects what should be the future of our countryside. It rests with you to substitute new objects of beauty where the old ones have been withdrawn. I do not think it is vulgarizing the countryside to build factories and homes for the workers, but let them be buildings full of charm."

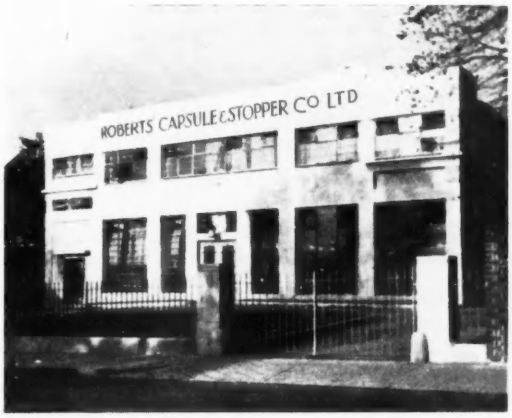
Sir Edwin Lutyens, responding, asked : " What hope is there for our countryside when the development of London is left to the whims and idiosyncrasies of those whose self interests are proclaimed by crude advertisements ? Our traditions are as good as in any country, yet we build as if we were barren of tradition, with no idea or ideal beyond obvious economy and pride in the achievements of the machine age. The innovations in our old villages and towns seem conscious only of the flagrant advertisement and new and undigested ideas."

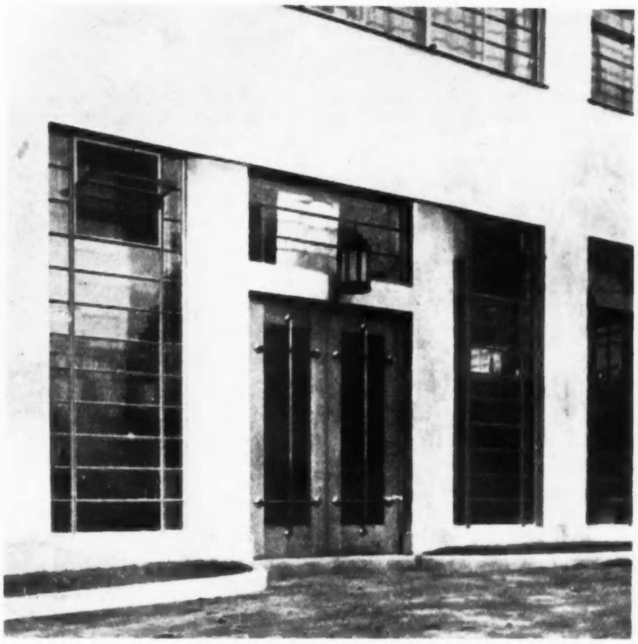
Other speakers included Lord Askwith, Dr. Leslie Burgin, Parliamentary Secretary to the Board of Trade, Sir Henry Maybury, vice-president of the Association, and Mr. J. W. Dulanty, High Commissioner for the Irish Free State.

IRISH ARCHITECTURE

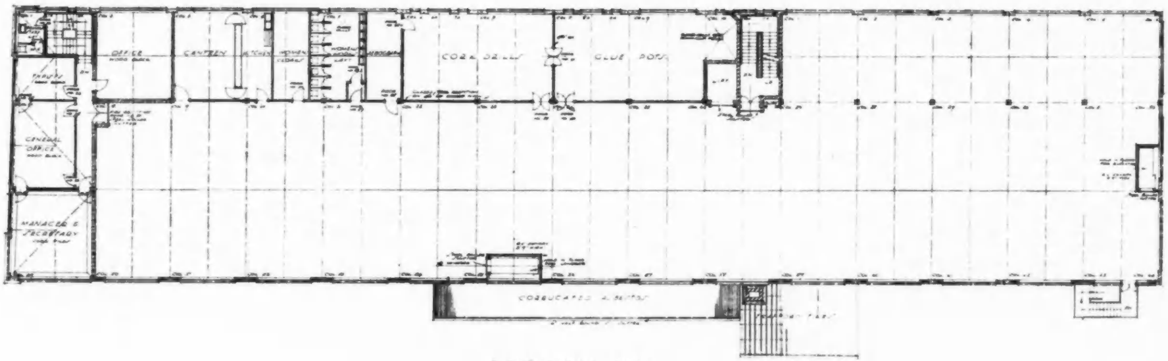
Mr. Vincent Kelly, F.R.I.A.I., speaking recently in Dublin on " Architecture and the Public," said working and middle class houses and shops were springing up all over Ireland, which were modelled on the hideous English architectural designs of the nineteenth century. This could be more easily understood when it was realized that the planning of 95 per cent. of the houses now being built had been entrusted to men who have had no training in architecture, and who did not even call themselves architects.

FACTORY AT PECKHAM RYE

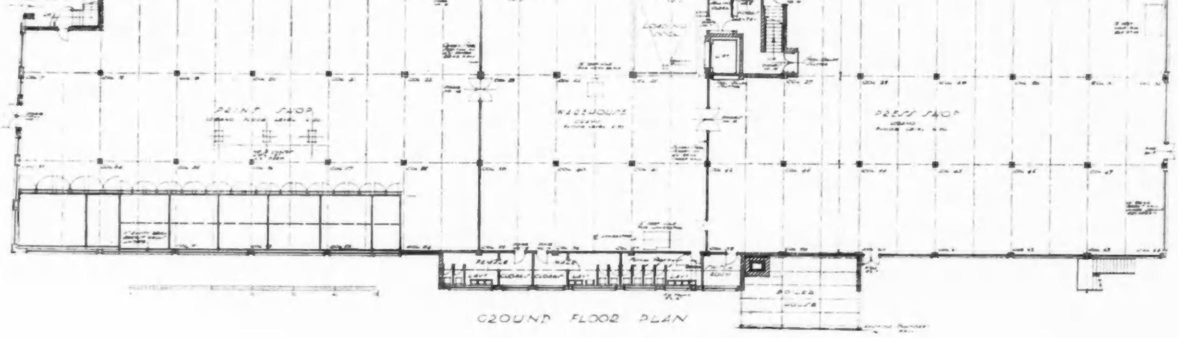

ROBERTS CAPSULE & STOPPER CO LTD



The factory consists of two main floors each of 18,000 sq. ft., with an upper floor for warehousing. It is constructed in reinforced concrete with brick panel walls. The floor finish is granolithic generally with wood blocks and cork in the offices. Metal windows are used throughout; those on the side elevations being of standard type, and on the front elevation being specially made sashes divided horizontally.


OFFICE
CANTEEN
KITCHEN
WOMEN
CLOAKS
LAVY
CORK DRILLS
GLUE POTS
LIFT
GENERAL OFFICE
MANAGER & SECRETARY
CORRUGATED ASBESTOS

FIRST FLOOR PLAN


PRINT SHOP
WAREHOUSE
PRESS SHOP
LOADING
BOILER HOUSE

GROUND FLOOR PLAN

BY WALLIS, GILBERT AND PARTNERS

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Housing in Scotland

FIGURES and statistics relating to housing in Scotland were given by Sir Godfrey Collins, the Secretary of State for Scotland, in the House of Commons last week.

In reply to Sir Archibald Sinclair, Sir Godfrey Collins said the numbers of State assisted houses under construction and the numbers approved for subsidy but not begun at various dates were (see Table I).

The number of houses completed in county areas in Scotland, exclusive of burghs, with assistance under the Housing (Scotland) Act, 1930, in each month from March 1 to October 31 last was (see Table II).

The numbers of slum clearance houses in Scotland in course of construction, and approved, but not begun, under the Housing Acts of 1923 and 1930 respectively at the end of each month from February to October, 1933, inclusive, were (see Table III).

Major Nathan asked the Minister of Health how many houses had been completed by local authorities without State assistance in the administrative county of London, and in the rest of England and Wales, respectively, during the half-years ended March 31, 1932, September 30, 1932, March 31, 1933, and September 30, 1933, respectively.

Sir Hilton Young said that the following statement showed the desired particulars :—

Half-year ended :		Administrative County of London	Rest of England and Wales.
March 31, 1932	..	196	1,170
September 30, 1932	..	96	594
March 31, 1933	..	192	543
September 30, 1933	..	33	468

Major Nathan also enquired of the Minister if he could state the superficial area of the 240 houses now being erected at Aldershot by private enterprise under the Housing (Financial Provisions) Act, 1933, and the average superficial area of non-parlour houses provided by local authorities in England and Wales during the period January to October, 1933, respectively; and what steps he had taken or would take to ensure that all houses erected by private builders in the Greater London region under the Housing Act, 1933, were of a proper standard for the working classes.

Sir Hilton Young said he was informed that the superficial area of the houses mentioned was 662 square feet in some cases, and 653 in others. The average area of houses provided by local authorities during the period mentioned was 728 feet. The minimum dimensions of houses erected under the Housing (Financial Provisions) Act, 1933, were governed by Section 92 of the Housing Act, 1925, of which Section 2 of the 1933 Act was an extension.

TABLE I.

		NUMBER OF HOUSES			
		Under construction at the end of the months shown in Column 1.		Approved for subsidy but not begun during months shown in Column 1.	
Month (1)		1932 (2)	1933 (3)	1932 (4)	1933 (5)
February	..	14,234	22,315	6,531	10,050
March	..	14,786	23,503	7,938	9,173
April	..	15,383	24,269	8,777	7,662
May ..	..	15,977	23,505	7,877	7,176
June	..	15,992	23,146	8,448	7,084
July	..	16,899	22,764	7,673	7,347
August	..	17,287	22,574	7,438	6,656
September	..	18,180	21,687	7,007	5,910
October	..	18,514	20,238	7,869	5,008

TABLE II.

Date. 1933.		NUMBER OF HOUSES COMPLETED.
March	.. ..	224
April	.. ..	168
May ..	.. ..	233
June	.. ..	120
July	.. ..	222
August	.. ..	215
September	.. ..	185
October	.. ..	160

TABLE III.

		Housing, etc., Act 1923		Housing (Scotland) Act, 1930		Totals	
As at 1933.		Under construction.	Approved but not begun.	Under construction.	Approved but not begun.	Under construction.	Approved but not begun.
February	..	892	354	7,708	2,072	8,600	2,426
March	..	886	264	7,918	2,345	8,804	2,609
April	..	1,010	200	8,117	2,032	9,127	2,232
May ..	..	952	120	7,923	2,292	8,875	2,412
June ..	..	952	78	7,947	2,774	8,899	2,852
July	..	958	24	7,859	3,182	8,817	3,206
August	..	886	24	8,165	3,152	9,051	3,176
September	..	850	42	8,157	2,813	9,007	2,855
October	..	834	36	7,960	2,557	8,794	2,593

Scottish National Library

Commander Cochrane, in Parliament last week, asked the First Commissioner of Works whether arrangements had been concluded for the employment of an architect to prepare plans and designs for the proposed building for the National Library of Scotland, and whether these arrangements involved any substantial liability?

Mr. Ormesby-Gore replied that it was hoped the appointment of an architect to prepare plans and designs for the proposed building for the National Library of Scotland would be made shortly. The draft agreement provided for a first payment to the architect of £1,500 on approval of the sketch plans. The necessary financial provision would be made on the estimate for Art and Science Buildings, Great Britain, for the forthcoming financial year.

SCHOOL PRINCIPALS

• 4 •

HOWARD ROBERTSON

ARCHITECTURAL ASSOCIATION, LONDON

MR. HOWARD MORLEY ROBERTSON, M.C., F.R.I.B.A., S.A.D.G., was born at Salt Lake City in 1888, and educated at Eastfield House, Ditchling, Sussex, and Malvern College. He received his architectural training at the Architectural Association, and the Ecole des Beaux Arts, Paris, and served as assistant in offices in London, Boston and New York. He was awarded the French Government Architectural Diploma in 1913.

After the war (he served in France during 1915-1919) Mr. Robertson went into partnership with Mr. J. Murray Easton and in 1931 the practices of Mr. E. Stanley Hall and Messrs. Easton and Robertson were merged. He has been principal of the Architectural Association School of Architecture since 1920.

Mr. Robertson's principal works include: Bathing Pool and Pavilion, Golf Hotel and Residences, Prestatyn, North Wales; British Government Pavilion, Paris Exhibition of Decorative Arts, 1925; School Pavilion, Malvern, and New Hall for the Royal Horticultural Society (these last three works were won in competition); 52, Cornhill; 6, Lothbury; work at the Savoy, Berkeley and Claridge's Hotels, and houses in London, the provinces and abroad. His academic distinctions include the R.I.B.A. Godwin Bursary, 1933, and the London R.I.B.A. Architecture Medal, for the Royal Horticultural Hall, 1928. He is a member of the Council of the R.I.B.A., and the Building Industries National Council (Chairman of the Public Relationships Committee of this body). Mr. Robertson's publications are as follows: *Principles of Architectural Composition*, 1924; *Architecture Explained*, 1926; *Modern French Details*, with Mr. F. R. Yerbury, 1928; *Modern Architectural Design*, 1932; and contributions to the architectural press.

QUESTIONS THAT ARISE

Chimney from old Open Fire

¶ A. B. writes: "*I am renovating an old farmhouse in Kent. A large fireplace, previously bricked up, has now been discovered. This measures about 4 ft. 6 ins. wide by 2 ft. 6 ins. deep. There is no flue, but the upper extremity of the chimney is finished with an ordinary pot, with the result that it is impossible to light a fire without volumes of smoke coming into the room. As cheapness is an essential part of the job, do you think that if a concealed metal flue were built into the chimney and a patent pot, such as 'Edwardian,' were used, this would remedy the trouble, or do you think that it would be any use trying the pot first without alteration to the flue?*"

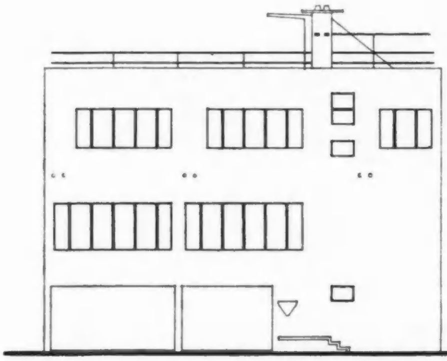
Such chimneys were made for log fires and the cause of poor draught is usually the inability of the smaller modern coal fires, intermittently burnt, to warm the large column of air contained. As a cure, it will probably be necessary to roof over the fire-opening above the arch or beam, with a perforation for smoke outlet (and a sweeping door) below which a canopy over the actual fire may be needed, and, above, an internal flue pipe extending up to near the pot. A cellactite flue pipe would be preferable to metal, which condenses badly and is apt to decay. A covered top to the chimney is advisable—either by an "Edwardian" pot or by one of the farmhouse methods current in the district.

Surface for a School Playground

¶ R. writes: "*Could your expert suggest a cheap but durable surface for a school playground. I thought of using 3 ins. of gravel well rolled in and grouted in cement. Is this likely to be efficient?*"

The cost of the method proposed seems likely to be in the neighbourhood of 2s. 6d. per yard, and its durability is doubtful, depending on the cleanness of the gravel and the freedom from seasonal movements in the sub-soil. On clay or loam the paving would soon break up. It is also likely to give a harsh surface, resulting in injury from tumbles, which are common in playgrounds.

If the bed for paving is a good one, I would prefer to rely on a paving with an element of flexibility such as clinker asphalt or tar-paving which, at very similar cost, have the advantages of resilience, a "kinder" surface, and exclusion of soakage from the bed. E. G.



TRADE NOTES

[BY F. R. S. YORKE, A.R.I.B.A.]

Cork Insulation

I AM informed by manufacturers that since the prices of cork insulating slabs were given in these Notes on November 30, the cost of the material has risen slightly. Prices per ft. square, for slabs measuring 3 ft. × 1 ft. and 3 ft × 2 ft. are now:—

1″ thick	2¾d.	per ft.	sq.
1½″ ,,	4⅛d.	,,	,,
2″ ,,	5d.	,,	,,
3″ ,,	7½d.	,,	,,
4″ ,,	10d.	,,	,,

Concrete Houses

L. H. de Konnick, winner of the 1933 Competition for a Concrete House, organized by the Group of Manufacturers of Belgian Cement (winning design illustrated on pages 723-26 of last week's issue of THE ARCHITECT'S JOURNAL), sends me the following table, showing comparison of costs between the L. H. de Koninck system of construction and traditional construction in local bricks.

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The quantities are taken for the type of house submitted in the competition. The comparison is made on the carcase work only, the materials for finishing being the same in each case.

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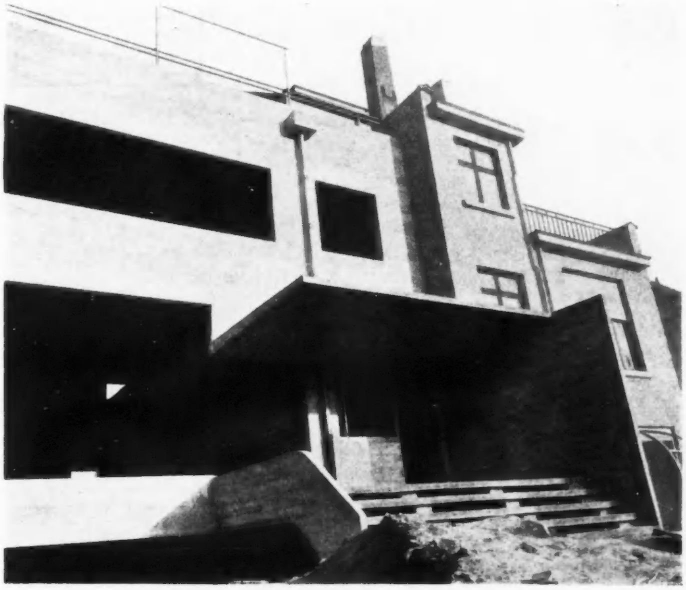
The elevation of the winning design is reproduced above, and below is a progress photograph showing Koninck's method of construction.



Reinforced concrete frame for a house at Uccle, Belgium, by L. H. de Koninck, 1933. The construction is similar to that adopted in the winning design for the Concrete House Competition, mentioned above. The concrete above openings is reinforced to form deep beams in little thickness.

		A L. H. de Koninck's System.			B Traditional, Local Brick.	
		Francs per Unit.	Number of Units.	Cost in Francs.	Francs per Unit.	Number of Units.	Cost in Francs.
a	Terraces	8·00	100·3^{3}	802·40	8·00	134·54^{3}	1,076·32
b	**A** Foundations in reinforced concrete **B** Foundations in broken brick concrete	400·00	4·95^{3}	1,980·00	120·00	16·74^{3}	2,008·80
c	External walls complete	136·00	224·95^{2}	30,600·00	162·00	240·00^{2}	38,880·00
d	**A** Cellars in reinforced concrete .. .. **B** Cellars in built-up walling	450·00	7·83^{3}	3,523·50	220·00	29·76^{3}	6,547·20
e	**A** Columns .. .. **B** Beams and lintols	450·00	3·534^{3}	1,588·50	450·00	7·39^{3}	3,325·50
f	Access to terrace ..	109·00	14·60^{2}	1,591·40	109·00	14·60^{2}	1,591·40
g	Pent roof	800·00	0·43^{3}	344·00	800·00	0·43^{3}	344·00
h	**A** B.A.S.C. hollow floor .. .. **B** Solid floor ..	35·00	195·06^{2}	6,827·10	425·00	27·134^{3}	11,531·95
i	**A** B.A.S.C. basement floor .. .. **B** Brick finish over mass concrete ..	45·00	20·00^{3}	900·00	25·00	25·00^{2}	625·00
j	**A** Partitions on patent mesh, plaster finish **B** Partitions in breeze, plaster finish ..	34·00	145·55^{2}	4,948·70	41·50	145·55^{2}	6,040·32
k	**A** "Latarm" ceiling on fillets .. .. **B** Ceiling of fibrous plaster sheets on fillets	20·00	116·94^{2}	1,869·24	20·00	116·94^{2}	1,869·24
l	**A** Chimney with flues in asbestos-cement tubes .. .. **B** Built up flues and terra cotta pots ..	129·00	11·50^{1}	1,483·50	108·00	11·50^{1}	1,242·00
m	Damp-proof courses ..	8·00	51·24^{2}	409·92	8·00	88·92	711·36
n	Bitumen emulsion on roof terrace	73·00	69·15^{2}	5,047·95	73·00	84·70^{2}	6,183·10
o	"Petit Granite Belge" finish	—	—	—	1,800·00	3·00^{3}	5,400·00

Total cost of structure	**A**	62,024·57 Fcs.	**B**	87,954·11 Fcs.
Total, including finishes ..		117,533·37 ,,		143,462·91 ,,
		A = 80%		**B** = 100%
	or	**A** = 100%		**B** = 121%

●

The cost of the completed house, including finishes, is, in sterling at par, £672 in constructional system **A**; £820 in constructional system **B**; the accommodation being identical in each case.

Stic B

Stic B was described in a recent issue of THE ARCHITECTS' JOURNAL as a "cement proof paint"; the manufacturers suggest "preservative and decorative stone covering" as a more accurate definition.

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A new brochure giving particulars of the material has recently been issued. It contains an abridged report on tests carried out by the Department of Scientific and Industrial Research on Stic B as a waterproofing treatment for brick, cement mortar and concrete surfaces; details of the properties and methods of application, and samples of the covering applied in twelve standard colours.

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It is claimed the covering may be applied over drying surfaces without danger of its peeling, since moisture is able to escape slowly outwards through it, but no damp is able to penetrate the reverse way into the material to which it is applied. It is further stated that alkalis, always present in cement and plaster renderings, and liable to cause saponification and disintegration of an oil base, have no deleterious effect on Stic B, if this is properly applied. It has qualities of elasticity and will seal the hair cracks that form in cement surfaces.

THE BUILDINGS ILLUSTRATED

Sub-Contractors' List

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :—

Birmingham Municipal Bank (pages 748 and 755-8). General contractors, W. J. Whittall and Son, Ltd. Sub-contractors: Caxton Floors, Ltd., fireproof floors; J. Jeffreys & Co., Ltd., heating and ventilation; Thos. Glover, electrical work; Aluminium, Ltd., aluminium sills; Bath and Portland Stone Firms, Ltd., portland stone; Crittall Manufacturing Co., Ltd., metal sash windows; Henry Hope and Sons, Ltd., metal windows; Val-de-Travers Asphalte Paving Co., Ltd., asphalt work; Waygood-Otis, Ltd., lifts and cork work; J. Whitehead and Sons, Ltd., marble work; Pavino Flooring Co., Ltd., floor tiling; The Chatwood Safe Co., Ltd., strong room doors; The Birmingham Guild, Ltd., bronze doors and grilles; H. H. Martyn & Co., Ltd., fibrous plaster work; Allied Guilds, Ltd., fibrous plaster work, Guildstone and decorating banking hall ceiling; W. B. Simpson and Sons, Ltd., wall tiling; The Turk Drying Co., Ltd., drying work; DeJong & Co., Ltd., and Gilbert Seale and Son, fibrous plaster work; Moreland Hayne & Co., Ltd., constructional steelwork; John Booth and Sons, fireproof door; British Vacuum Cleaner and Engineering Co., vacuum plant; Pilkington Bros., Ltd., lantern lights; Empire Stone Co., Ltd., grano' pavings; Fenning & Co., Ltd., granite; Harris and Sheldon, Ltd., screens and panelling; F. Restall, Ltd., banking hall counter and screens; Parker, Winder and Achurch, Ltd., ironmongery; Chubb and Son's Lock and Safe Co., Ltd., renters to safe deposit; Kingfisher, Ltd., metal chairs; Roneo, Ltd., steel furniture; Sankey, Sheldon, Ltd., steel furniture; Lee, Longland & Co., Ltd., wood furniture and carpets; Gent & Co., Ltd., electrical clocks; Best and Lloyd, Ltd., electrical fittings; Benham and Sons, Ltd., kitchen equipment; Haywards, Ltd., glass; A. J. Dix, leaded glazing; Birmingham Guild, Ltd., honours boards; W. J. Furse & Co., Ltd., refrigerator; Baldwins, Ltd., sanitary fittings; May Acoustics, Ltd., "Sabinite" acoustic plaster to machine room and other rooms; J. A. King & Co., Ltd., King lights; Hollis Bros., Ltd., oak and teak block flooring; Kean and Scott, Ltd., curtains; Dictograph Telephones, Ltd., dictograph instruments.

Southgate Shopping Centre (pages 761-769). General contractor, Bovis, Ltd. Consulting engineer, R. Travers Morgan, M.INST.C.E. Sub-contractors: Ames and Finnis, facing bricks; Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt; F. Sage & Co., shop fittings; Crittall Manufacturing. Co., lantern lights, window frames and shop fronts; J. A. King & Co., glascrete roofing light; J. P. White & Son, flush doors; Carter & Co. (Poole), mosaic to columns and stall boards, wall tiling, and terrazzo paving; North British Rubber Co., rubber flooring and mats; Shanks & Co., sanitary fittings; Jas. Gibbons Ltd., door furniture; Empire Stone Co., artificial stone clock face curbs and sills; Patent Victoria Stone Co., artificial stone paving; Starkie Gardner & Co., bull's-eye sign and box signs; Acme Flooring Co., hardwood floors; Trussed Concrete Steel Co., screens and lavatory partitions; Marbello and Durus, Ltd., floor paving (Durus); Benham and Sons, "Electro-Vapour Radiators"; Starkie Gardner, Ltd., and Comyn Ching & Co., Ltd., bronze ventilators J. R. Pearson (B'ham), Ltd., collapsible gate; Thos. Elsley, Ltd., R.W. goods.

Factory at Peckham Rye (page 771). General contractors, Wilson Lovatt and Sons, Ltd. Sub-contractors : Trussed Concrete Steel Co., Ltd., Reinforced Concrete Engineers, reinforcing steel ; E. J. Elgood, Ltd., granolithic work ; Banister Walton & Co., Ltd., steel roof trusses ; Leeds Fireclay Co., Ltd., sanitary fittings ; Mellowes & Co., Ltd., patent glazing ; Brookes, Ltd., artificial stone steps ; Haywards, Ltd., fire escape stairs, iron ladder, and collapsible gates ; Mather and Platt, Ltd., sprinkler installation and steel roller shutters : Educational Supply Association, sliding and folding doors : H. W. Dutton & Co., Ltd., heating installation ; Electrical Installations, Ltd., electrical installation : J. and E. Hall, Ltd., lift installation ; Venesta, Ltd., Plymax partitions : Williams and Williams, Ltd., steel sash screens ; Shaw's Glazed Brick Co., Ltd., faience lettering ; Comyn Ching & Co., Ltd., ironmongery ; Acme Flooring and Paving, Co., Ltd., wood block flooring : Mundet Cork Products, cork tile flooring ; John Williams and Sons (Cardiff), Ltd., "Jonwindows" standard type industrial sashes and specially made horizontal type sashes.

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We regret that in the list of contractors for the new staircase at Messrs. Heal's premises, Tottenham Court Road, W.C., illustrated in our last issue, we inadvertantly omitted the name of Messrs. Art Pavements and Decorations, Ltd. The firm was responsible for the Biancola wall lining to the staircase, panelled up with strips of Birmabright metal.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

BARKING. *Houses and Hospital.* The Corporation is to prepare plans for the erection of 265 houses on the Movers Lane estate, for displaced slum tenants, and for the erection of a maternity hospital with 24 beds.

COULSDON. *Houses and Shops.* Plans passed by the U.D.C. : two houses, Arundel Avenue, Sanderstead, for Messrs. R. Costain and Sons ; two houses, Fairdene Road, for Mr. E. B. Clarke ; 14 houses, Church Way, Sanderstead, for Mr. N. A. Holmes ; two houses, Kerrill Avenue, for Mr. R. V. Tuttee ; three houses, Lime Meadow Avenue, Sanderstead, for Messrs. Hooker and Rogers ; six shops, Taunton Avenue, Old Coulsdon, for Firmus Constructions, Ltd. ; eight houses, Haydn Avenue, Purley, for Mr. H. W. Lee : two houses, Brigstock Road, for Mr. H. T. Griffiths ; three houses, Arkwright Road, Sanderstead, for Mr. L. H. Harrington ; six houses, Bradmore Way, for Messrs. E. Best and Co., Ltd. ; two houses, Melrose Road, for Mr. H. Salter ; five shops, Chipstead Valley Road, for Mr. S. C. Kirby.

ENFIELD. *Houses.* The Reynolds Development Co. is to erect 200 houses at Hoe Lane and Caterhatch Lane, Enfield.

FINSBURY. *Tenements.* The B.C. is to erect 40 tenements at Cyrus Street, at a cost of £19,050.

LAMBETH. *Housing Scheme.* The L.C.C. is to undertake a clearance and rehousing scheme at the Tanswell Street area, Lambeth, at a cost of £65,000.

LAMBETH. The L.C.C. is to clear the Ethelm Street area, and provide re-housing accommodation, at a cost of £18,000.

LEWISHAM. *Houses and Swimming Bath.* Plans passed by the B.C. : Houses, Thornsbeach Road, Catford, for Messrs. James Watt, Ltd. ; shops and flats, Perry Hill, Catford, for Mr. F. S. Prior : eight houses, Canobie Road, Forest Hill, for Messrs. Snow Bros. : nine houses, Thornsbeach Road, for Mr. L. A. Culliford ; swimming bath, etc., Perry Rise, for Mr. S. P. Thornett.

ROMFORD. *School.* The Essex Education Committee has approved plans for the erection of a senior school in Pettits Lane, at a cost of £38,674.

SOUTHGATE. *Houses.* Plans passed by the Corporation : 30 houses (amended plan), Elmscott Gardens, for Mr. G. W. Newman : 170 houses, Chase Vale Farm estate, for Messrs. Geo. Wimpey & Co., Ltd. ; conversion of "Camden House," Chase Road, into children's home, and conversion of 10, Arundel Gardens, into children's home, for the County Architect ; two houses, Ringwood Way, for Mr. G. W. S. Ingram : six houses, Abbotshall Avenue, for Messrs. F. and R. Woodward ; conversion into two flats, 481, Green Lanes, for Mr. A. Smith.

WATFORD. *Flats and Shops.* The Dalton Houses Estate Co. is in negotiation with the Corporation regarding the development of the estate by the erection of 120 flats and shop premises.

WOODFORD. *Houses.* Plans passed by the U.D.C. : 51 houses, Uplands estate.

SOUTHERN COUNTIES

OXFORD. *Roads and Sewers.* The Corporation is to construct roads and sewers, at a cot of £9,300, on the Rose Hill estate, so that arrangements may proceed with the erection of 152 houses.

OXFORD. *Houses and Shops.* Plans passed by the Corporation : Shop, Hollow Way, Cowley, for Mr. J. E. Cammell ; workshop and garage, "Duke of York" public-house, St. Ebbe's, for Morrell trustees ; four houses, Bowness Avenue, for Messrs. Cripps and Stewart ; 22 houses, Oliver Road, Cowley, for Messrs. R. Gardner and Son ; two houses, Botley Road, for Mr. A. J. Coppock ; two houses, Eden Drive, for Messrs. Pontin & Co. ; 20 houses, Napier Road, Cowley, for Messrs. F. and R. Lewis, Ltd. ; seven houses, Ferry Road, New Marston, for Mr. R. Hedges ; four houses, Ridgeway Road, for Messrs. L. J. Davies & Co. : 598 houses, Florence Park estate, for Messrs. N. Moss and Son, Ltd.

SOUTH-WESTERN COUNTIES

CHELTENHAM. *Houses.* Plans passed by the Corporation : 14 houses, Hatherley Road, for Messrs. Wheeler and Mansell ; eight houses, Harp Hill, for Mr. A. E. Hunt : two houses, Pitville Circus Road, for Messrs. A. C. Billings and Sons ; four houses, Evesham Road, for Mr. W. H. Bowd ; two houses, Montpelier Terrace, for Mrs. Bence ; shop, Whaddon Road, for Mr. R. W. Wonson ; four houses, Sanday Lane, Charlton Kings, for Messrs. Mark Williams & Co. : estate development, near Shurdington railway station, for Messrs. Wheeler and Mansell : four houses, Garden estate, Charlton Kings, for Capt. J. L. Richardson ; three bungalows, Shurdington, for Mr. H. A. Bendall.

PLYMOUTH. *Houses and Lay-out of Streets.* Plans passed by the Corporation : Two houses and shops, Victoria Road, St. Budeaux, for Mr. W. Andrews : two houses, Cranmere Road, for Mr. R. Hockin ; two houses, Cranmere Road, for Messrs. J. Davy and Son : two houses, Union Street, Stonehouse, for Mr. C. Skinner ; six houses, off Efford Lane, for Mr. H. Cann ; lay-out of streets, adjoining Hyde Park Road, for Messrs. Hill and Lang.

EASTERN COUNTIES

COLCHESTER. *Houses.* The Corporation Housing Committee has approved a lay-out plan providing for the erection of 10 two-bedroom type houses, and 36 one-bedroom type houses, for aged persons, on a portion of the Ipswich-Harwich Road site.

MIDLAND COUNTIES

DUDLEY. *Houses.* Plans passed by the Corporation : Four houses, Buffery Road, for Messrs. Watchorn and Hughes ; eight houses, Priory Road, for Messrs. S. and H. Brookes : two houses, Burnt Tree, for Mr. David Webb ; two houses, Adshead Road, for Mr. I. Round ; 12 houses, High Street, for Messrs. Lloyd Bros.

ILKESTON. *Houses.* Plans passed by the Corporation : Two houses, New Lawn Road, for the Rev. A. Copley ; eight houses, Heanor Road, for Mr. W. H. Dawson ; shop, Heanor Road, for Mr. Russell ; house and shop, Heanor Road, for Mr. R. Warren.

NORTHAMPTON. *Houses.* Plans passed by the Corporation : Twenty houses, Headlands estate, for Messrs. A. Glenn and Sons, Ltd. ; six houses, Monks Hall Road, for Mr. W. B. Chattell ; four houses, Welford Road, for Midland Dwellings, Ltd. : two houses, Balfour Road, for Messrs. Roughton and Butt ; nine houses, Abbey Street, for Mr. G. F. Sharman ; two houses, Rushmere Road, for Messrs. Stafford and Agutter ; 160 houses, Headlands estate, for Messrs. T. Wilson and Son, Ltd.

WEST BROMWICH. *Swimming Baths.* The Corporation is seeking sanction for a loan of £30,000 for the erection of new swimming baths, and improvements at the old baths.

NORTHERN COUNTIES

BIRKENHEAD. *Tenements.* The Corporation is to prepare plans for the erection of a further block of 12 tenements on the St. Mary's Gate area.

LEEDS. *Washhouses.* The Corporation is seeking sanction to borrow £12,000 for the erection of washhouses in Meanwood Road.

LEEDS. *Housing Schemes.* The Corporation has obtained sanction to borrow £73,000 for housing schemes.

MANCHESTER. *Chimneys.* The Corporation is to erect new chimneys at the Barton power station, at a cost of £23,000.

MANCHESTER. *Housing Schemes.* The Corporation is to seek sanction for a loan of £4,000,000 for housing schemes.

MANCHESTER. *Houses.* The Corporation reports that the housing programme consists of the erection of 15,000 houses at a cost estimated according to the type of rehousing accommodation constructed, to lie between £5,850,000 and £7,875,000.

MORECAMBE. *Houses.* Plans passed by the Corporation : Three houses, Brantwood Avenue, for Mr. F. J. Shuttleworth ; shop, Claremont Road, for Bradford Building Society ; 12 houses, Twemlow Parade, for Mr. A. Barker ; warehouse, Market Street, for Morecambe Press, Ltd. ; four houses, Knowlys Avenue, for Strawberry Gardens, Heysham Ltd. ; 16 houses, Walker Grove, for Mr. G. Clark. Messrs. Brook and Kershaw propose to erect 106 houses on the Westgate estate.

SOUTH SHIELDS.—The Education Committee has appointed Mr. F. W. Newby as architect for the alterations and extensions required to the present high school, in order to convert it into a central school for boys.

WALLASEY. *Houses.* The Corporation is to undertake clearances involving the erection of 200 houses in the next five years.

YORK. *Houses, etc.* Plans passed by the Corporation : Stores, Parliament Street, for British Home Stores, Ltd. ; estate development, Heslington Lane, for Messrs. J. Allison and Sons ; house and shop, Saxon Lane, for Mr. A. Park ; two houses, Westwood Terrace, for Mr. E. Relton ; two houses, St. Olave's Road, for Messrs. H. Colman and Sons ; four flats, 9 Bootham Terrace, for Rev. H. Griffith ; abattoir extension, Cemetery Road, for York Industrial Society, Ltd. ; 11 houses, Moorgarth Avenue, for Messrs. R. J. Pulleyn and Sons ; six houses, Burton Grange estate, for Mr. A. Temple ; seven houses, Beech Avenue, for Sir R. Newbald Kay.

SCOTLAND

GLASGOW. *Cinemas, Shops, etc.* Plans passed by the Corporation : New ophthalmology building, Western Infirmary, for governors ; cinema, Blairgowrie Road, for Messrs. John C. M'Keller, Ltd. ; cinema, Paisley Road West, for Mr. James Hay ; shops, Amulree Street, for Messrs. Easton, Finlay and Mackenzie ; factory extension, Munro Place, Anniesland, for Messrs. Birrell, Ltd.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen ; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	ABERDARE	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	*1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	BANBURY	S. Counties	1 3	11¼
B_1	Bangor	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B_3	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	*1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11¼
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5½	1 1¼
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A_1	Buxton	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A_3	Cumberland	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
A_2	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	*1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11¼
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	GATESHEAD	N E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	*1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11¼
A	HALIFAX	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	JARROW	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	LANCASTER	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	*1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11¼
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1 [illegible]	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH	N.W. Counties	1 4½	1 0½
A	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	PAISLEY	Scotland	*1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	*1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	*1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	TAMWORTH	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	15½	1¼
A	Tyne District	N. E. Coast	1 5½	1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11¼
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A_3	Worksop	Yorkshire	4	1 0
A_1	Wrexham	N.W. Counties	5	1 0¾
A_3	Wycombe	S. Counties	4	1 0
B_1	YARMOUTH	E. Counties	1 3	11¼
B_1	Yeovil	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
White Portland Cement	,,	8	15	0
Thames Ballast	per Y.C.		6	3
¾" Crushed Ballast	,,		6	9
Building Sand	,,		7	3
Washed Sand	,,		8	3
2" Broken Brick	,,		8	0
¾" ,, ,,	,,		10	3
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s. d.	6" s. d.
Straight Pipes	per F.R.	0 9	1 1
Bends	each	1 9	2 6
Taper Bends	,,	3 6	5 3
Rest bends	,,	4 3	6 3
Single junctions	,,	3 6	5 3
Double ,,	,,	4 9	6 6
Straight channels	per F.R.	1 6	2 6
¾" Channel bends	each	2 9	4 0
Channel junctions	,,	4 6	6 6
Channel tapers	,,	2 9	4 0
Yard gullies	,,	6 9	8 9
Interceptors	,,	16 0	19 6
IRON DRAINS:			
Iron drain pipe	per F.R.	1 6	2 6
Bends	each	5 0	10 6
Inspection bends	,,	9 0	15 0
Single junctions	,,	8 9	18 0
Double junctions	,,	13 6	30 0
Lead wool	lb.	6	—
Gaskin	,,	5	—

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	8	17	6
,, Wirecuts	,,	7	17	6
,, Brindles	,,	7	0	0
,, Bullnose	,,	9	0	0
Red Sand-faced Facings	,,	6	18	0
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	7	10	0
Luton Facings	,,	7	10	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	0	0
Headers	,,	20	10	0
Bullnose	,,	27	10	0
Double Stretchers	,,	29	10	0
Double Headers	,,	26	10	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	4½
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	28	17	6
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		18	6
,, ⅞"	,,	1	1	6
,, 1"	,,	1	2	0
,, 1¼"	,,	1	5	0
,, 1½"	,,	1	10	0
Deal matchings ⅝"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1½"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	,,	8	6
,, ,, ⅜"	,,	8	3
,, ,, ½"	,,	8	0
,, ,, ⅝"	,,	7	6
,, ,, ¾"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.	8	10
Shoes	each	2 0	3 0
Anti-splash shoes	,,	4 6	8 0
Boots	,,	3 0	4 0
Bends	,,	2 7	3 9
,, with access door	,,	—	6 3
Heads	,,	4 0	5 0
Swan-necks up to 9" offsets	,,	3 9	6 0
Plinth bends, 4½" to 6"	,,	3 9	5 3
Half-round rain-water gutters of ordinary thickness metal	F.R.	5	6
Stop ends	each	6	6
Angles	,,	1 7	1 11
Obtuse angles	,,	2 0	2 6
Outlets	,,	1 9	2 3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	0	6
,, drawn pipes	,,		17	6
,, soil pipe	,,	1	0	6
,, scrap	,,		11	0
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			8½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3"	4"	6"
Plain cast	F.R.	1 0	1 2	2 6
Coated	,,	1 1	1 3	2 8
Galvanized	,,	2 0	2 6	4 6
Holderbats	each	3 10	4 0	4 9
Bends	,,	3 9	5 3	10 3
Shoes	,,	2 10	4 4	9 6
Heads	,,	4 8	8 5	12 9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s. d.		s. d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.			2¾
,, ,, 26 oz. ,, ,, ,,	,,			3¼
Arctic glass, white	,,			7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,			6½
¼" Hartley's rough rolled	,,			7
¼" ,, wired cast	,,			10
¼" Georgian wired cast	,,			11
¼" Polished plate, n/e 1 ft.	,,	†7½	to	‡1 0
,, ,, 2	,,	†10	,,	‡1 3½
,, ,, 3	,,	†1 4½	,,	‡1 10
,, ,, 4	,,	†1 11	,,	‡2 4
,, ,, 6	,,	†2 3	,,	‡2 7½
,, ,, 8	,,	†2 5	,,	‡3 0½
,, ,, 12	,,	†2 10	,,	‡3 3½
,, ,, 20	,,	†3 3½	,,	‡3 9
,, ,, 45	,,	†3 6½	,,	‡4 0½
,, ,, 65	,,	†3 11½	,,	‡4 4
,, ,, 90	,,	†4 4	,,	‡4 9
,, ,, 100	,,	†4 6	,,	‡4 11
Vita glass, sheet, n/e 1 ft.	,,			1 0
,, ,, ,, ,, 2	,,			1 3
,, ,, ,, over 2	,,			1 9
,, ,, plate, n/e 1 ft.	,,			1 6
,, ,, ,, 2	,,			3 0
,, ,, ,, 5	,,			4 0
,, ,, ,, 7	,,			5 0
,, ,, ,, 15	,,			6 0
,, ,, ,, over 15	,,			7 6
Putty, linseed oil	lb.			3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	2	0	0
,, ordinary	,,	2	0	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
" to reduce levels n/e 5' 0" deep and cart away	Y.C.		8	6
" to form basement n/e 5' 0" deep and cart away	"		9	0
" " 10' 0" deep and cart away	"		9	6
" " 15' 0" deep and cart away	"		10	0
If in stiff clay . . . add	"		2	6
If in underpinning "	"		4	0
Planking and strutting to sides of excavation	F.S.		1	0
" " to pier holes	"			5
" " to trenches	"			5
" " extra, only if left in	"			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	"	1	6	0
" " (4-2-1)	"	1	12	6
" " underpinning	"	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
" junctions		3	9	4	6
Gullies and grating	"	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	27	10	0
" " in cement	"	28	15	0
" Stocks in cement	"	35	0	0
" Blues in cement	"	52	0	0
Extra only for circular on plan	"	2	0	0
" backing to masonry	"	1	10	0
" raising on old walls	"	2	0	0
" underpinning	"	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	"			8¼
" " " red brick facings and pointing	"			11
" " " blue brick facings and pointing	"		1	4
" " " glazed brick facings and pointing	"		3	6
Tuck pointing	"			7
Weather pointing in cement	"			3½
Slate dampcourse	"			10
Vertical dampcourse	"		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	"	6	9
¾" paving or flat	"	4	0
1" paving or flat	"	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	"		13	6
Artificial stone and do.	"		13	0
York stone templates, fixed complete	"		10	6
" thresholds	"		13	6
" sills	"	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	"	3	7	0
Do., 24" × 12"	"	3	17	0
Westmorland slating, laid with diminished courses	"	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	3	0	0
Do., all as last, but of machine-made tiles.	"	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	"	4	6	6
" " " " " " (green)	"	4	15	0

CARPENTER AND JOINER

		£	s.	d
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
" to stanchions	"			8
" to staircases	"		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	"		4	6
" " roofs	"		6	6
" " trusses	"		7	6
" " partitions	"		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" " " " "	"	1	17	6
1¼" " " " "	"	2	3	0
¾" × 2" fir battening for Countess slating	"		9	6
Do. for 4" gauge tiling	"		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
" " " 2 "	"		2	9
" " " 3 "	"		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" " " " " "	"		1	6
2" deal wrought rounded roll	F.R.			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼" do.	"	2	10	0
1½" do.	"	2	17	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1¼" do.	"		1	9

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	9½
2" " "	"	1	11½
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1½" heads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	3	7
2" " " "	"	3	10
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" " " "	"	2	8
1½" " but moulded both sides	"	2	4
2" " " "	"	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	0
4½" × 3½" " "	"	1	4
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	2	6
1½" deal moulded wall strings	"	2	1
1½" " outer strings	"	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" " "	"	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	"	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	"		19	6
Do. stanchions with riveted caps and bases and do.	"		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	0
Do. in flashings		1	17	6
Do. in covering to turrets, etc.	"	2	3	6
Do. in soakers	"	1	9	6
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close " "	"			4½

		½" s. d.	¾" s. d.	1" s. d.	1½" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	"	6½	8	9	11	1	—
Boiler screws and unions	"	3 3	3 9	5 0	8 0	—	—
Lead traps	"	—	—	—	6 3	8 9	—
Screw down bib valves	"	6 9	9 6	11 0	—	—	—
Do. stop cocks	"	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	"	1	6
Do. outlets	"	4	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	"	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	"		3	6
Lathing with sawn laths to ceilings	"		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"		1	8
Do. vertical	"		2	1
Rough render on walls	"		1	3
Render, float and set in lime and hair	"		1	11
Render and set in Sirapite	"		2	1
Render, backing in cement and sand, and set in Keene's cement	"		2	10
Extra, only if on lathing	"			4
Keene's cement, angle and arris	F.R.			6
Arris	"			2
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			1½
1" granolithic pavings	Y.S.		3	6
1½" "	"		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	"		17	6
9" × 3" " " " "	"	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	"		8½
Arctic glass and glazing with putty	"	1	1
Cathedral glass and do.	"	1	2
Glazing only, British polished plate	"		7
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	"		9
Do. with washable distemper	"	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	"	2	9

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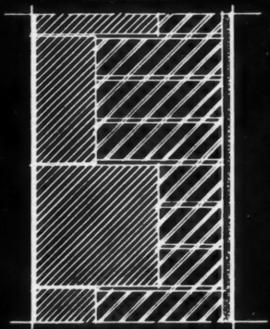
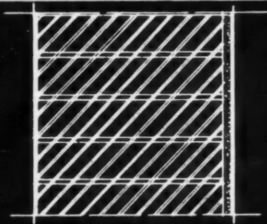
Figures given are for walls in cement mortar.



PORTLAND STONE, ——— 9" & 4½"
PHORPRES FLETTON BACKING, 9" & 4½"

Weight per cubic foot ——— 130 lbs.
Weight per sq. ft. of wall face { no plaster ——— 146 lbs.
{ plaster one side ——— 151 lbs.

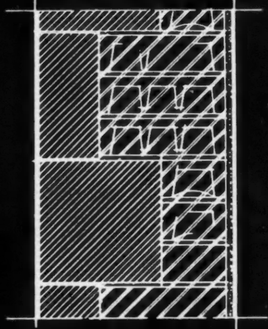
PORTLAND STONE, ——— 12"
Weight per cubic foot ——— 160 lbs.
Weight per sq. ft. of wall face { no plaster ——— 160 lbs.
{ plaster one side ——— 165 lbs.



OR

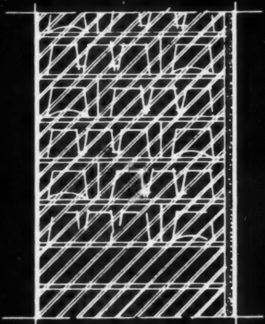
COMMON BRICK, ——— 13½"
PHORPRES FLETTON, ——— 13½"

	PHORPRES FLETTON	COMMON BRICK
Weight per cubic foot	100 lbs.	120 lbs.
Weight per sq. ft. of wall face: no plaster	113 lbs.	135 lbs.
plaster one side	118 lbs.	140 lbs



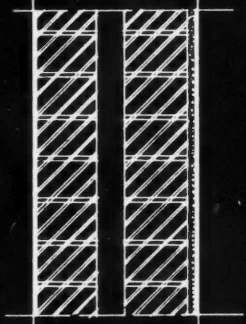
PORTLAND STONE ——— 9" & 4½"
CELLULAR FLETTON BACKING ——— 9" & 4½"

Weight per cubic foot ——— 122 lbs.
Weight per sq. ft. of wall face { no plaster ——— 137 lbs.
{ plaster one side ——— 142 lbs.



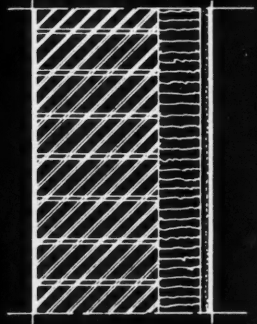
CELLULAR FLETTON ——— 13½"

Weight per cubic foot ——— 84 lbs.
Weight per sq. ft. of wall face. { no plaster ——— 94 lbs.
{ plaster one side ——— 99 lbs.



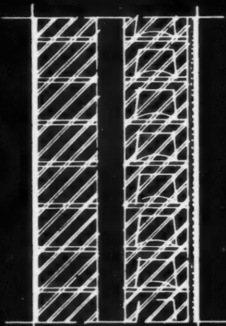
COMMON BRICK, OR PHORPRES FLETTON.
TWO 4½" SHELLS & CAVITY

	PHORPRES FLETTON	COMMON BRICK
Weight per cubic foot	100 lbs.	120 lbs.
Weight per sq. ft. of wall face: no plaster	75 lbs.	91 lbs.
plaster one side	80 lbs.	96 lbs.



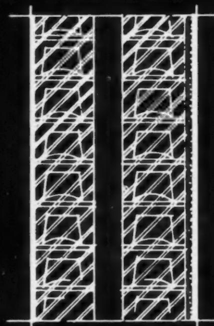
COMMON BRICK OR PHORPRES FLETTON ——— 9"
& HOLLOW TILE BACKING ——— 3"

	PHORPRES FLETTON	COMMON BRICK
Weight per cubic foot	90 lbs	105 lbs.
Weight per sq. ft. of wall face: no plaster	90 lbs	105 lbs.
plaster one side	95 lbs	110 lbs.



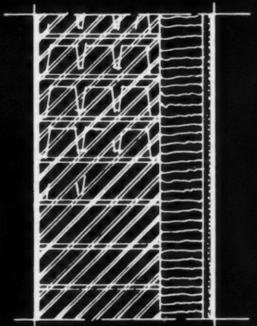
SOLID FACING BRICK ——— 4½"
CELLULAR FLETTON ——— 4½"

Weight per cubic foot ——— 103 lbs.
Weight per sq. ft. of wall face { no plaster ——— 74 lbs.
{ plaster one side ——— 79 lbs.



CELLULAR FLETTON, TWO 4½" SHELLS & CAVITY

Weight per cubic foot ——— 84 lbs.
Weight per sq. ft. of wall face { no plaster ——— 64 lbs.
{ plaster one side ——— 69 lbs.



CELLULAR FLETTON ——— 9"
HOLLOW TILE BACKING ——— 3"

Weight per cubic foot ——— 79 lbs.
Weight per sq. ft. of wall face { no plaster ——— 79 lbs.
{ plaster one side ——— 84 lbs.

INFORMATION SHEET : COMPARATIVE WEIGHTS OF VARIOUS TYPES OF EXTERNAL WALL.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

Supplement to THE ARCHITECTS' JOURNAL for December 14, 1933

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INFORMATION SHEET

• 61 •

BRICKS

(WALL WEIGHTS)

Name of Product : Bricks

Types Illustrated : Phorpres Brick, Phorpres Cellular and Common Brick.

Description :

The diagrams given on this Sheet illustrate various common types of external wall and give the weights per cubic foot and per square foot of wall surface. The figures given are average actual weights, modified only in cases where an arbitrary weight is generally accepted for the particular product.

Name of Manufacturers :	London Brick Company and Forders Ltd.
Address	Africa House, Kingsway London, W.C.2
Telephone	Holborn 8282 (10 lines)

Supplement to THE ARCHITECTS' JOURNAL for December 14, 1933

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NOTE:
The following schedule of prices is comparative only
All prices given are per square yard laid or fixed unless otherwise noted.

PAVINGS,	DEC. 1933.	
ARTIFICIAL STONE, on concrete.	13/-	
ARTIFICIAL STONE, on hardcore & sand.	10/6.	
BRICK, on concrete.	11/6.	
BRICK, on hardcore & sand.	9/-	
CONCRETE, pre cast slabs.	7/9.	
CONCRETE, in situ in panels	8/6.	
QUARRY TILE, on concrete	15/-	
QUARRY TILE, on hardcore & ashes	12/6.	
TARMAC TYPE, on hardcore	7/-	
YORK STONE, on concrete	24/6.	
YORK STONE, on hardcore & ashes.	22/-	
FLOORINGS,		
BOARDING, in narrow widths, 1" Oak	8/6.	
CORK TILE, 3/8"	15/-	
GRANOLITHIC, 1"	3/-	
JOINTLESS FLOORING,	15/-	
KORKOID, according to colour design	9/6 – 12/-	
LINOLEUM,	5/- – 8/6.	
MARBLE, Bianco del Mare.	33/-	
MOSAIC,	14/6.	
PARQUET,	11/-	
QUARRY TILE, 6"×6"	10/6.	
RUBBER TILE, 1/4"	16/3.	
RUBBER SHEET, 1/4"	14/-	
RUBBER, cement backed tile	17/-	
STONE PAVING, Silex.	38/3.	
TILE, Encaustic.	14/-	
TERRAZZO, pre-cast tiles.	16/3.	
TERRAZZO, in situ.	17/3.	
TRAVERTINE,	33/-	
WOOD BLOCK, 1" European Oak.	7/6.	

WALL FINISHES,	DEC. 1933.	
BAKELITE, on screeding	60/-	
BEATL, on plywood veneered 2 sides	115/-	
CELLULOSE PAINT, (on keenes)	1/8.	
CEMENT GLAZE, Stippled	7/-	
Smooth	9/-	
COLOURED CEMENT RENDERING, according to colour	5/- – 8/-	
CORK TILE,	18/-	
DISTEMPER,	8d	
ENAMEL,	2/6.	
GLASS, opaque on screeding	29/-	
GRANITE GLASS, on screeding	38/-	
LAP, without metallic leaf	72/-	
LINOLEUM,	5/- – 8/-	
MARBLE, Botticini.	65/-	
MIRROR, on battens.	36/-	
PAINT, on plaster.	1/9.	
PLASTER, lime	1/7.	
hard. Sirapite keenes	1/6. 2/7.	
PLASTER BOARD, on battens	5/-	
PLYMAX, on battens	16/-	
PLYWOOD, with decorative veneer.	72/-	
, painted.	15/-	
RUBBER TILE,	18/-	
TERRAZZO, pre-cast slabs.	27/-	
, on walls.	16/-	
TILE, glazed.	15/-	
TRAVERTINE,	54/-	
WALL BOARD, on battens	4/6.	

Information from Oswald E. Parratt. F.S.I. Chartered Surveyor.

INFORMATION SHEET: SCHEDULE OF RELATIVE COSTS OF FINISHINGS.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.I.

INFORMATION SHEET • 62 • COSTS OF FINISHINGS

Supplement to THE ARCHITECTS' JOURNAL for December 14, 1933

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 62 •

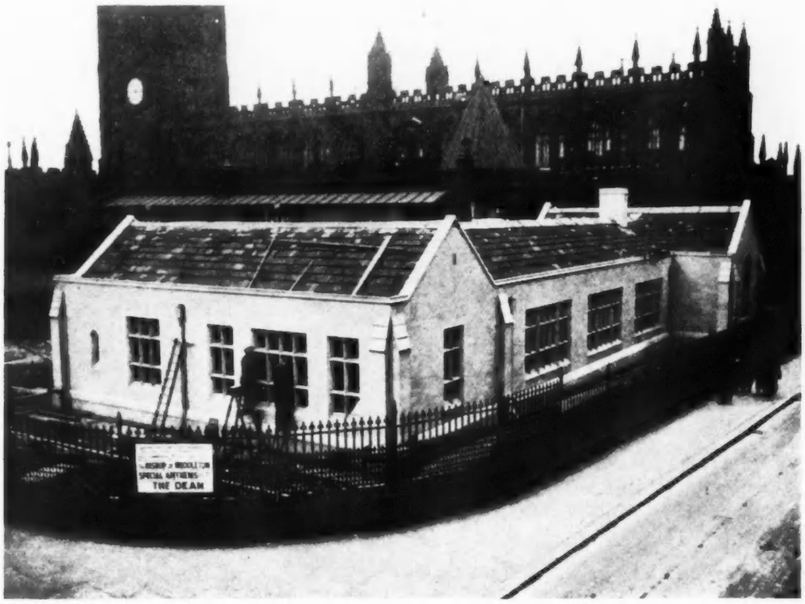
COMPARATIVE COSTS OF FINISHINGS

Note:

The prices given on this Sheet have been prepared by a Quantity Surveyor as a guide to current prices for various types of finishes. It is important that the list should be regarded only as approximate, as the fluctuations in market prices and conditions of the job will affect the price in any particular case. The white spaces may be used for revisions to prices, as these vary.

NEW WORK IN MANCHESTER

THE CATHEDRAL SCHOOL

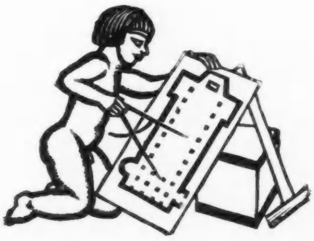

BISHOP OF MIDDLETON
SPECIAL ANTHEMS
THE DEAN

THE new Cathedral School at Manchester, by Thomas Worthington and Sons, is now under construction. It is situated within the Cathedral Close and has been designed to be as low and unobtrusive as possible so as not to obstruct the view of the Cathedral, which is seen occupying the background in the photograph above.

ARCHIPELAGO

Delegates to the Fourth Congress of the International Congresses for Modern Architecture (C.I.A.M.), having completed work in Athens, sailed among the Greek Islands, visiting Syra, Mykonos, Delos and Scyros, where the photograph reproduced above was taken by Professor L. Moholy-Nagy, official Congress photographer. The photograph forms part of his Congress Film, recently exhibited in London.

Further "stills" from the film are reproduced on page 792.



HOUSING AND A NATIONAL PLAN

CONSTRUCTIVE thinking as opposed to the commoner art of compromise is so rare even in the wisest councils that we become very greatly indebted to those who, under circumstances complicated by every form of political confusion, can school themselves to think of a problem in terms of ascertainable fact, and face the result bravely.

It is now some years since *The Week-end Review* published Mr. Max Nicholson's National Plan, which was a very daring effort to cut through the political, economic and social entanglements in which we find ourselves. That plan, admittedly a gauntlet thrown into the arena of confusion, stimulated, and in some measure, organized constructive thinking on the lines of national reorganization.

In the field of Housing alone it has helped to clarify thought, and is to a great extent responsible for the series of constructive contributions to this subject which *The Week-end Review* has made in the last few years. These contributions, like Mr. Philip Massey's Slum Clearance Survey for THE ARCHITECTS' JOURNAL, have been a *presentation of fact*, and as such have worked more strongly in people's minds than whole torrents of badly based emotionalism.

The Week-end Review's report on the Current Minimum Cost of an Adequate Dietary, which appeared last April, stimulated the B.M.A. to a more authoritative examination that established a standard which has been accepted by everyone concerned with health and housing, including the Government. And now, following the failure of the Minister of Health to gauge within even the wildest limits the amount of unfit houses, we are again indebted to *The Week-end Review*, this time for a means of measuring Minimum Standards for housing.

It should be clearly understood that the method put forward by *The Week-end Review* and brought to order by Mr. Ellic Howell and a group of coadjutors, contains nothing that is strange to common-sense, or anything that has not been fairly common knowledge for some years. It is merely an orderly arrangement of accepted standards in a form which allows of measurement, on the principle that anything that is measurable is knowable.

There are, as the Report says, three main elements in a minimum standard :—

(*a*) Number of rooms which must vary according to the number of persons concerned, and their subdivision according to family groups, ages and sexes.

(*b*) Structure and equipment, including the size, condition, and resources of the accommodation, which do not vary so closely according to the number of users.

(*c*) External factors, including accessibility to work, recreation and common services, amenities and so forth.

In the Report Mr. Philip Massey's Minimum Standards, produced for THE ARCHITECTS' JOURNAL, have been accepted; and the standards under the heading "Structure and Equipment" are generally those already acceptable by most authorities, with the addition of an accessibility for employment standard, which would very easily rule out a good deal of the transplanting carried out by the L.C.C.

We have seen in the last few weeks a very determined attack upon the present Government's plans for Slum Clearance, and have remarked the absence in Government replies of any clear statement of their means of arriving at their inadequate figures. The popular imagination is inflamed by a sense of injustice which Sir Hilton Young is unable to allay, and the position might remain unchanged were it not that the determined efforts made by groups of people working for papers like *The Week-end Review* and such planning agencies as P.E.P., are presenting means of measuring the facts of the case that will cause the "expediency" methods of a Government to fall away before a planned attack on National Housing. This scale of minimum housing must now be applied by organized bands of people to large areas of London and elsewhere, and the detailed results published before the mad rush to do something, no matter what, has added a further degree of overcrowding to the un-planned congestion of poorer England.

The minimum standard of light to living rooms, applied generally, will probably show that, while a great deal of the worn-out two-storey property in East London does get a fair supply of daylight, the great blocks erected in pious hope of clearing the slums on sites unfitted by the haphazard nature of their street planning, very often do not; and that rebuilding to be lastingly effective must involve a wider spacing of blocks, and a much more thoroughgoing re-planning than at present obtains in even the most enlightened quarters. To see the effect of such minimum daylight spacing plotted over existing areas of London would be instructive, and is a work waiting to be done.

Meanwhile this instrument for measuring housing standards has its immediate application in Whitehall and in the cities which have already sent in their returns to the Minister. It is, whether it is wanted or not, another cog in the evolving machine of National Planning.

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Buildable
Parl
London

NOTES & TOPICS

THE HOUSE OF LORDS

IN last week's debate in the House of Lords on Housing Policy the Government did not do very well. The Bishop of Winchester cited the figures for houses required given by Sir Raymond Unwin, *The Times*, and THE ARCHITECTS' JOURNAL.

*

The Marquess of Reading, the Bishop of London, Lord Balfour of Burleigh, the Earl of Listowel, Lord Daryngton, Lord Trent and Lord Dynevor supported his plea for a national housing board.

*

For the Government Viscount Gage simply said : " We are satisfied that we are taking the course best calculated to promote the supply . . . etc., etc." He added that 35 building societies with aggregate funds amounting to £236,000,000, were *prepared* to build small houses to let at low rentals.

*

They have now been *prepared* for months, running into years. When are they going to begin ?

THE NEW CUNARDER

Jubilation in the Press. Naturally. The good work of engineering will go forward. Dredging operations will begin now to get the Clyde into a fit state for the passage of this gigantic piece of naval architecture.

*

Not a word about her interior, though. At present she shelters under the gestatory label of No. 534. Will her internal architecture be reflected in her name : shall we have to bear with a *Jacobearia*, a *Georgia* or a *Tudoria*?

*

Now is the time for the Cunard directors to realize that they are the subjects of His Majesty King George V and not of " Bluff King Hal," " Good Queen Bess," or " Dead Queen Anne."

BROADWAY HAS A PLAN

"The Broadway plan business is the most cheering thing I've read about for a long time," said a town-planner to me *apropos* of my note last week. Broadway is a beauty spot, but even beauty spots have to grow.

*

Preservation rather than planning so often actuates local enthusiasts, and preservation without plans for growth is dangerously negative. Broadway faces the traffic facts of the twentieth century, and the new plan allows for the parking of cars and coaches and the landing of aeroplanes.

THE MINISTER OF PLANNING

For some while Mr. Gerald Barry has been doing the most vital salvage work in modern civilization. He has been trying to rescue and to restore to active usefulness the sinking critical faculty of this country.

*

Don't make the mistake of thinking he is a mere " literary gent." When he founded *The Week-end Review* he was not giving a bookish public just another " literary " journal ; he was protesting, in the most urgently effective way, against mass-produced public opinion ; against the manipulative treatment of economic and social facts ; against the squalor, the muddle and the extravagant misery of our bankers' paradise.

*

His paper has been ceaselessly constructive. It has published surveys ; it has promoted investigations, such as that on the *Minimum Cost of an Adequate Dietary* by a committee under the chairmanship of Professor A. L. Bowley. Last week it published a compact report on *Minimum Standards for Housing*.

*

If and when our rulers, driven either by revolutionary disaster or by a belated realization of the impossible inhumanity of maintaining our present system of economic, industrial, social and moral insanities, ask for a national plan they will get a good one. Thousands of intelligent people all over the country know that the blue prints of national reconstruction already exist, thanks in great part to Mr. Gerald Barry and *The Week-end Review*.

NATHANIEL LLOYD

I once stayed with Nathaniel Lloyd at Great Dixter. The open hearth, the blazing tree trunks, the great refectory hall made one feel like a wayfarer of the dark ages seeking shelter beneath the roof of a monastery, wherein the holy brothers kept bright the Old Learning with the zeal of religious men, not because it was old but because it was good.

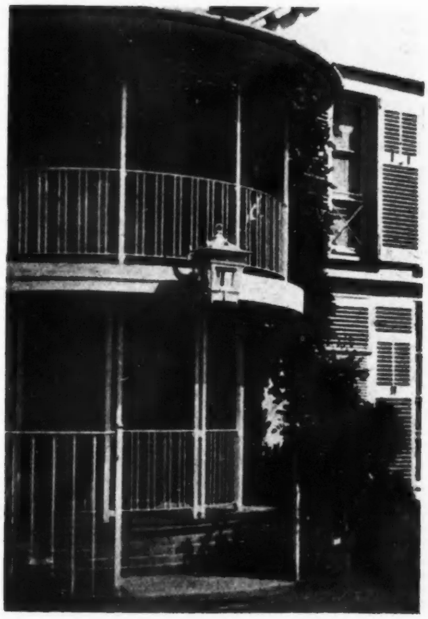
Nathaniel Lloyd was the abbot of tradition and building craft. Shoddy modern workmanship he put where he put a weed on the green—on the bonfire. His attitude to golf was typical. The attitude of a craftsman wielding the tools of his trade with love upon a carefully-prepared material—in this case grass.

*

Yet he was essentially modern, one of the few genuinely modern minded men I have met. The last time we talked he put forward, in that convincing deliberate way of his, suggestions for certain future developments. They were revolutionary, but they were right.

*

It was because he approached tradition not as an antiquary but as a practical man of affairs whose abilities had already been demonstrated in the business world, that he was such a rare possession.



The White House, Shiplake, Henley-on-Thames, designed in 1908 by George Walton, an early pioneer in the rational use of modern materials. The photograph shows the entrance on the west side of the house. The front door beneath the balcony is entirely of glass; and the glass is carried up through the first floor and for several feet above the balcony roof, providing the entrance hall and staircase with diffused but ample light.

GEORGE WALTON—A PIONEER

George Walton died on December 10 in London, in his sixty-sixth year. He started work in Glasgow in 1888. Mackintosh followed in 1892, and Walton's recognition is as late in coming as was that of Mackintosh.

*

Walton never had a large practice, and his Kodak shops, which were his most prominent public contribution to architecture, were mostly pulled down on the reorganization of the Kodak Company.

*

The White House at Shiplake, built in 1908, remains, however, as he designed it, with all its furniture and fittings, and is perhaps the best testimony to his great genius. His work seems to be more practical and virile than that of Mackintosh, as he was less influenced by *l'art nouveau.*

*

In a letter which appeared in *The Architectural Review* this year he wrote, "I began in Glasgow, 1888, and was working among the founders of the Glasgow School of Painters. . . . About 1892, while in Glasgow, C. R. Mackintosh followed, and our work was interesting the Dutch, and later the Austrian architects, and the type of work we were then doing would, I think, even to-day have been looked upon as modern, but unfortunately the movement, after being distorted and twisted, returned from Austria through Paris, and finished in *l'art nouveau.*"

*

It will be gratifying for his friends and admirers to learn that on the day before his last illness the idea of an exhibition of his work was suggested to George Walton, at which he was very pleased. It is hoped that this exhibition will still be possible.

WHAT'S IN A NAME ?

The L.C.C. Improvements Committee is dying of inanition. London Transport has taken the trams away from it, there is not enough for it to do, and next year it will very likely disappear before L.C.C. reorganization.

*

Long ago, it cut Kingsway through from the Strand to Holborn, a great work of town planning. Since then the eggs which it has laid at the Elephant and Castle, Vauxhall, and Waterloo Bridge have all been addled ; while that rather special egg at Lambeth Bridge was markedly dated.

*

Who could be sorry to see a committee designed to effect "improvements" gently fade away ? If I could only feel that it was to be replaced by a committee of town planning research and reconstruction I would bundle the anachronism out of doors without mercy. But what hopes are there of that ?

*

Mr. F. A. Horner, a member of the City of London Corporation, has devised the simple expedient of roofing over the Thames between Blackfriars and London and Southwark Bridges to form an aerodrome for the city of London.

*

He admits to not having examined it from the structural, financial or from any but the purely personal standpoint, which might be described as the assumption that an aerodrome there would be a good thing.

*

In this simple faith he has caused large illustrations of this unholy concrete platform to appear in the daily papers and has been allowed to take up the time of a City Council.

*

This is the sort of "improvement" I complain of. This is the sort of scheme that takes up time when there is no planning agency in existence, fit to work on such long-term research programmes as an airport and transport approach system for London.

THE TRUSCON DANCE

I dropped in at the Wharncliffe Rooms last Saturday night, and found the Truscon Sports Club Dance in full swing. My time was limited. I had made arrangements with a friend to travel home with him on the 10.45 train from Waterloo. But it was difficult to leave.

*

Occasions like this, when architects, surveyors, and engineers meet on a social footing, are friendly and cheerful affairs ; that other architects were of the same opinion was obvious from the large number present. My friend travelled alone.

ASTRAGAL

THE ARCHITECTS' DIARY

Thursday, December 21

INSTITUTION OF WELDING ENGINEERS. (North Eastern Branch.) At *Neville Hall, Westgate Road, Newcastle-on-Tyne.* "Resistance Welding Machines." By C. A. Hadley.

INSTITUTION OF ELECTRICAL ENGINEERS. At *Savoy Place, Victoria Embankment, W.C.2.* "Electromagnetic Phenomena in High Voltage Testing Equipment." By B. L. Goodlet. 6 *p.m.*

Saturday, December 23

Sunrise 8.3 a.m. Sunset 3.55 p.m.

NEWS

◆

POINTS FROM THIS ISSUE

Blue prints of national reconstruction already exist 782

Many would rather see London without the Elgin Marbles than without Bedford Square 784

The first cocktail bar on a railway train 795

The collection on scientific lines of an enormous mass of apparently unrelated facts 800

Dispute over a wall 805

◆

SIR RICHARD ALLISON'S RETIREMENT

A presentation was made at the Office of Works last week to Sir Richard Allison, who is shortly retiring from the post of Chief Architect to the Department.

The gift, contributions to which had been made by all sections of the staff, took the form of a bureau bookcase.

HOUSING PLEA TO WESTMINSTER CITY COUNCIL

On Thursday last Sir Austen Chamberlain, M.P., headed a deputation which presented to the Westminster City Council a housing petition signed by 11,000 residents.

Sir Austen said the deputation asked the Council earnestly to consider the question of housing and to make provision to meet urgent needs. In connection with the slum-clearance proposals of the Minister of Health, he (Sir Austen) was informed that the programme of the Council at present included the provision of not more than 100 flats. He hoped his information was not correct.

The argument that Westminster was not a proper place for working-class houses was not a complete answer. It was impossible for people who spent their lives in their service to go to the outskirts, owing to the cost of travelling.

Sir Harold Morris, K.C., pointed out that of Westminster's population of 130,000, some 60,000 came within the category of industrial or working class. Over 20,000 were living in overcrowded conditions.

TRENDS IN THE INDUSTRY

The divergence between the trend of unemployment in the building and the public works side of the industry, respectively continues. The increases in unemployment in the building trades this year have been less than normal and the trend is downwards: in public works the trend is still upwards. Yet the economic considerations involved are fundamentally the same whether an individual wishes to invest in buildings or a public authority in public works. Low costs and interest rates are to the advantage of both.

Indeed, the case is stronger for public authorities. If public works are undertaken now when funds are plentiful, the rate charge necessary to finance the loan will be absolutely less than if they are undertaken at a higher interest rate. Further, every increase in industrial activity, every decrease in unemployment, will render that lower rate charge easier to pay; and therefore relatively much less.

There are some public works which must *be undertaken now or in the near future. If public authorities wait until a recovery of general industry definitely takes place and the rate of interest rises, the reverse of the above considerations will apply. Public authorities, and private interests as well, should take the long view, not the short-sighted one.*

Subscriptions to the fund of the Special Committee for Public Relations of the Building Industries National Council should be addressed to Mr. Oswald Healing at 5 Duke Street, W.C.2.

VANDALISM AND "KNIGHTED ARCHITECTS"

Under the title "Vandalism in London," the current issue of the *New Statesman and Nation* makes an attack on the "vested interests" in the "destruction of masterpieces" by "knighted architects."

"What," they ask, "would be said to a Bill for replacing St. Paul's Cathedral, Westminster Abbey and the Inns of Court by Government Offices to be designed by Sir Reginald Blomfield and Sir Herbert Baker? Such a Bill, instead of being howled down as a *reductio ad absurdum* of our present methods, would probably receive the blessings of the L.C.C. and be passed by a large majority of the House of Commons. The Office of Works, the London Passenger Transport Board, and even the Trustees of the British Museum, regard buildings with the unerring eye of Big Game Hunters—'That is rare, beautiful, and irreplaceable—let us destroy it.' They do not need to worry about St. Paul's and the High at Oxford, for these are being gently shaken down by man-made earthquakes. But Bedford Square, being the finest undamaged square in London, affords an ideal prey. The London Transport Board now proposes to run trolley-buses round it, and the British Museum, which owns some of the houses, is making them uninhabitable by building the new Elgin Marbles room right up against their back windows. We shall then be told that no one can be found to live in Bedford Square, and that economic principles require its destruction. Many would rather see London without the Elgin Marbles than without Bedford Square. Again, in St. James's Square, already disfigured, a new monster, looking like a penitentiary, is now being completed, and the housebreakers are busy on another fine house there, in place of which will rise some Medusa of whose features we have not yet been informed. To write querulous letters to *The Times*, after the event, is futile. What is required is a commission to mark as 'National Monuments' such noble architecture as still survives and to forbid their destruction."

R. I. B. A.

GENERAL MEETING

On Monday last, December 18, Mr. Serge Chermayeff, F.R.I.B.A., read a paper entitled *New Materials and New Methods*. The president, Sir Giles Scott, was in the chair. Following are some extracts from the paper:

Those problems in building which now require the architect's fullest attention and best service are the practical and economic problems of housing, industry and transport. The problems of regional and town planning, slum clearance and the erection of new buildings in a manner and with materials which will not saddle the obsoleteness of a bygone age on ourselves or on those who will come after.

We must examine materials and methods in relation to these principles and *not* in connection with details of secondary importance concerned with "Artistic Embroidery." The parallel ideal in industry is not to build bigger and better chimneys with the latest materials, but to eliminate them.

It is my endeavour to show that *new* materials and *new* methods worth examining have nothing in common with "Art Nouveau," but are, as it were, the chemicals of a new science of living. The briefest of surveys irrevocably demonstrates that: Materials and immediate technique lead—without method, which should govern both—nowhere.

Whereas many architects must be gratified at having the subtlest technique to facilitate reproduction of Greek motifs and details of another construction on concrete bridges we have as yet no "concrete code."

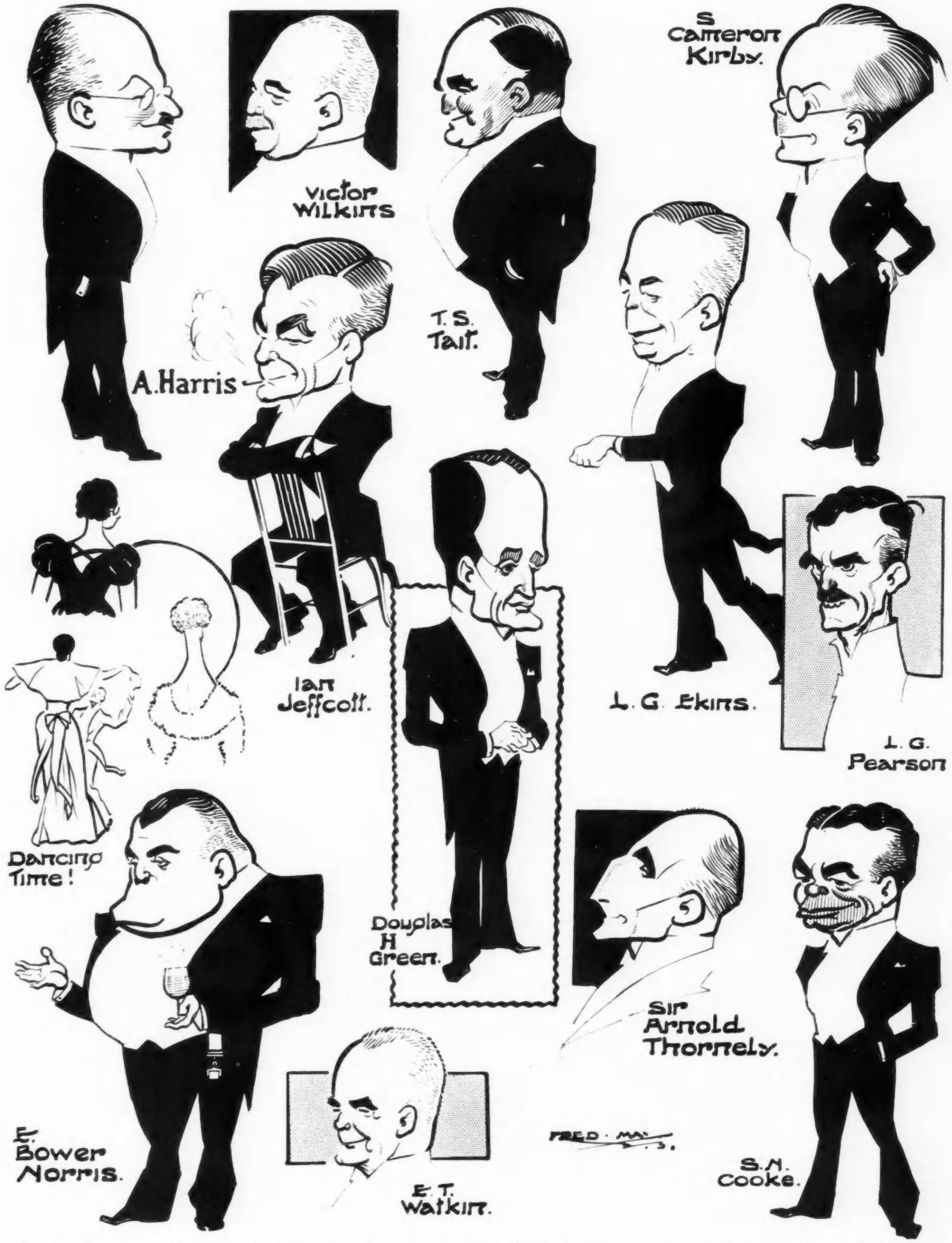
Cottage competitions which set old riddles with conditions that these should be solved with new fountain pens, contribute nothing to progress.

It is not progressive to disguise the commonplace to make it appear significant, or the obsolete to bring it up to date. It is essential to select for a specific purpose, within the defined cost, the most adequate material and method. That is to say—that material which best solves the problem of purpose, money and time.

Scientific harnessing of power gave us industry and mechanical transport. Industry's need of

[*Continued on page 786*

AT THE TRUSCON DANCE


Victor Wilkins
S Cameron Kirby.
T.S. Tait.
A.Harris
Ian Jeffcott.
L. G. Ekins.
L.G. Pearson
Dancing Time!
Douglas H Green.
Sir Arnold Thornely.
E. Bower Norris.
E.T. Watkin.
S.H. Cooke.

Douglas H. Green, Managing Director of the Trussed Concrete Steel Co., Ltd., and some of the guests who attended the firm's annual social and dance, held at the Wharncliffe Rooms, London, on Saturday last. The sketches are by Fred May.

hand power and transport's ability to make the contact between colony and factory called for greater concentration.

These concentrated communities, and the necessity to house them and to provide for their simplest needs, inevitably brought about the *mass* conception with its entirely new structural symbols. Greater strength and lightness in building-material are a consequence of increased size, to carry and accommodate the necessary fitting and equipment and resist greater strains.

Parallel to the mechanical and industrial development, the study of health and hygiene demanded of our mass structures maximum accommodation to fulfil to even a greater extent new requirements of better sanitation, greater cleanliness, more light, larger windows and improved artificial illumination.

The release, through cantilever construction, of maximum accommodation for special purposes, like clerical work, which requires maximum light, is a demonstrable, scientific fact and not a matter of controversy and opinion. To compensate the thinness of the new outer skin and enlarged window areas—to avoid the complications of innumerable flues in multi-storied buildings—easier, cheaper and different heating, or alternatively greater insulation against cold and heat loss had to be provided. Noise of traffic demanded greater insulation in materials against sound. These conditions were responsible for the development of synthetic sheeting, of which insulation board, with its remarkable qualities, is probably the most important, and the possibilities of its application appear to be only just touched.

At the same time, while contributing to comfort, the increase of scientific apparatus complicated the accommodation in building of these new additional organs and necessitated the calculated design of what Mr. Morton Shand calls "*a negative skeleton*" for the accommodation of equipment, complementary to the *positive* structural skeleton, leaving an uninterrupted maximum usable space, a method which is just beginning to oust the more common one of marking the wasted space on plan "duct." This points to the obvious economic duty of the architect to avoid the waste of room as well as of money.

We also find the deliberate elimination of the costly labour item to achieve a saving. This principle could be applicable where the benefits of the saving are vested in the occupier—particularly in the case of the lower paid worker—instead of taking the shape of additional profit for the speculator.

This principle could consist in the prefabrication of all essential structural parts of the simplest dwelling, and has been attempted on the Continent, in Russia and in America. Mass production and maximum prefabrication are the good results of the machine.

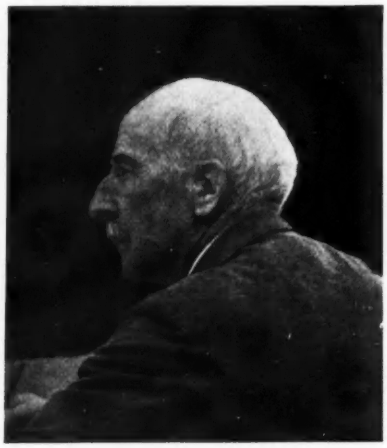
The vote of thanks to Mr. Chermayeff was proposed by Mr. Charles Holden, F.R.I.B.A., and seconded by Mr. C. Lovett Gill, F.R.I.B.A. Among those present were Mr. Erich Mendelsohn, Mr. Eric Gill, and Mr. Charles Marriott, Hon. A.R.I.B.A.

COMPETITION BARRED

The following notice has been issued by the Institute: "The Competitions Committee desire to call the attention of Members to the fact that the conditions of the competition for the proposed Mental Colony, Stoke-on-Trent, are not in accordance with the Regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime Members should not take part in the competition."

[*For competitions open and competitions pending, see* ARCHITECTS' JOURNAL *for December 7.*—ED., *A.J.*]

OBITUARY



NATHANIEL LLOYD

whose death occurred on December 10, in his sixty-sixth year. The following appreciation has been contributed

By MARTIN A. BUCKMASTER

TWENTY-FIVE years' friendship with Nathaniel Lloyd possibly entitles me to write this short notice of his various achievements during a full life of sixty-six years.

Starting in early life to earn his own living, after some years' experience, he founded the well-known printing house of his name from which he retired about twenty years ago.

On his retirement he then decided to leave London and settle in the country, and whilst looking for a suitable home in pleasant surroundings he came across the half-timbered Hall House at Northiam, called Great Dixter, then used as a farm dwelling needing considerable repair, the Great Hall being partitioned off into several compartments.

Nathaniel Lloyd was a man of very varied attainments with a wide outlook, and although architecture, both practical and theoretical, occupied a considerable part of his very busy life, he did not neglect the management of his estate or sacrifice in the least degree his home activities. He took infinite pains in all things that interested him, whether art or amusement, fly fishing, shooting, golf, billiards, or the more homely game of bridge: at all these sports he was an excellent performer and a very pleasant companion to play with. His keen interest in antiques was a bond between us, and many delightful excursions have we made together in search of specimen pieces, for our respective houses. As nothing but the best ever satisfied Nathaniel Lloyd, his house therefore naturally contained fine examples of Tudor and Queen Anne periods.

His great contribution to architecture and building is to be found in his famous work *A History of English Brickwork*; it is acknowledged, by all competent to judge, as the standard work on the subject. Also *The History of the English House* and *Building Craftmanship* are illuminating examples of his profound architectural knowledge. His outlook was by no means limited as his book on *Topiary* shows, an excellent example in first-hand experience in growing, and training, yew and box for his own garden at Great Dixter.

His *History of English Brickwork* is a good example of Lloyd's capabilities and diligence of research, most of the illustrations are from his own photographs taken throughout the country: numerous negatives being taken but many rejected, bent, as he always was, on obtaining only the best results. This monumental work has exhausted the subject, and all future books, or articles, dealing with brickwork will be indebted to Lloyd for first-hand knowledge. After this book was published he was commissioned, as the leading authority, to write the article on practical brickwork for the last edition of *The Encyclopædia Britannica.*

His association with Sir Edwin Lutyens in the reconstruction of his home at Northiam, one of the finest Tudor examples in Sussex, doubtless stimulated his interest in architecture which eventually became the dominating influence in his life. His taste was remarkably sound and although he had a distinct bias for mediæval work in Architecture and Furniture he did not close his eyes to the best of modern productions, although he had no patience with freaks.

Lloyd was on the Council for the Preservation of Rural England, for which he did much useful work in Kent and Sussex. He was also a founder of The Architecture Club, and a prominent member of The Arts Club.

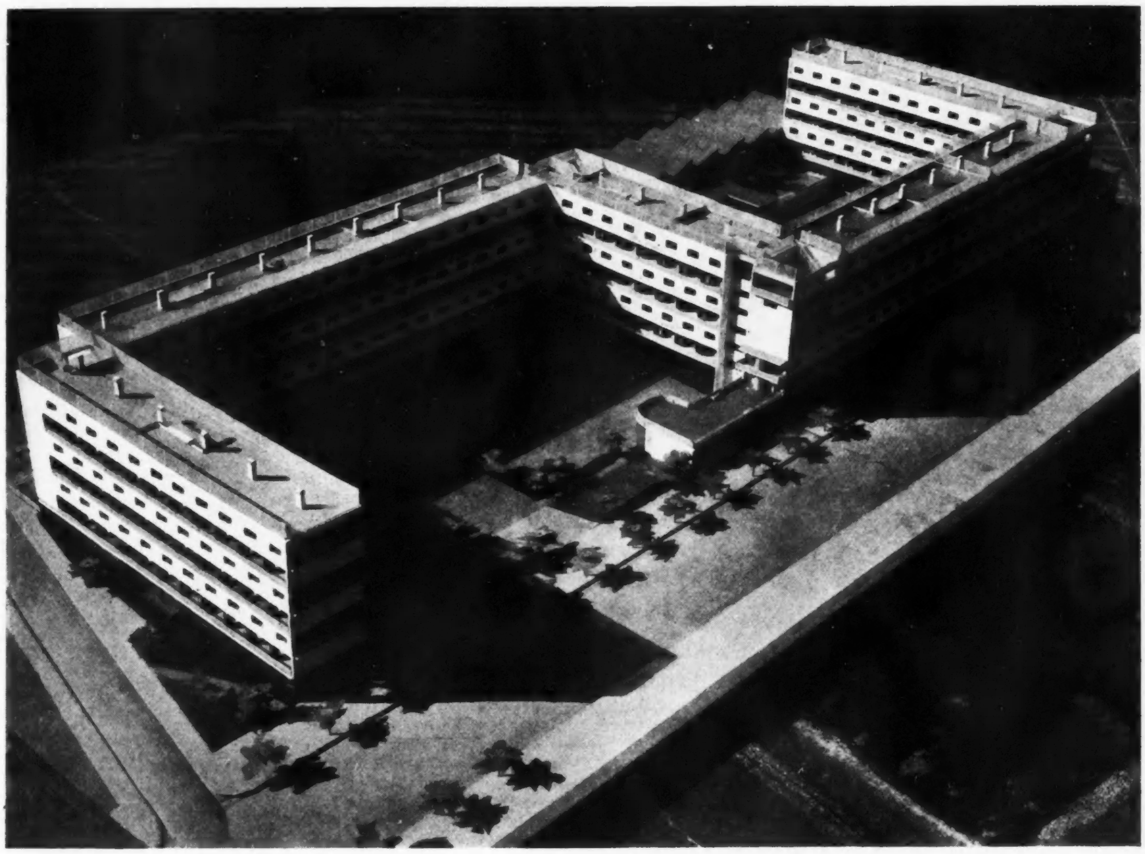
As a personal friend he is a great loss, his intelligent and honest outlook on all subjects was always stimulating; and if he provoked argument, as he frequently did, it was always cheerful and invigorating, and many happy evenings have I spent in such discussions, much to my benefit. I shall miss Nathaniel Lloyd very much; all his friends ever found him a just and generous man.

Recent Wills

Mr. Charles J. Dawson, F.R.I.B.A. (architect to the Barking Borough Council), left £27,290 (net personalty £17,039).

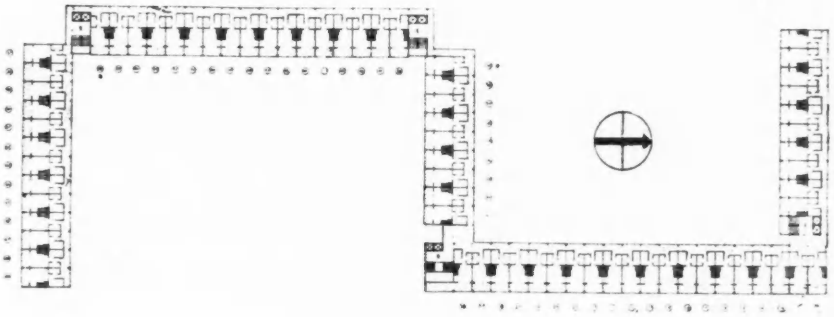
Mr. John Thompson, F.R.I.B.A., of Glasgow, left £5,970 (personal estate).

WORKMEN'S FLATS IN BARCELONA



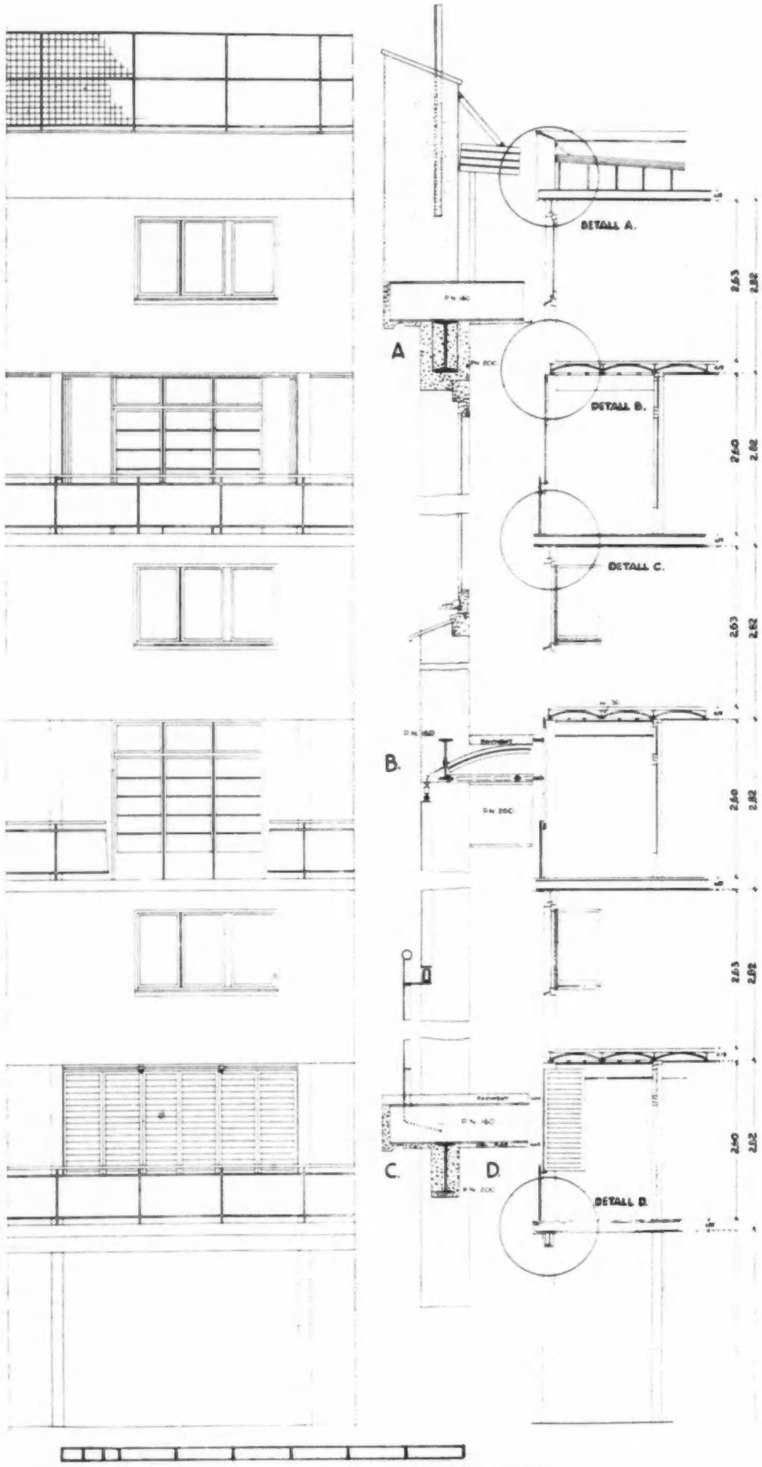
This block of workmen's dwellings, now under construction, has been designed by G.A.T.E.P.A.C., the group of modern architects working collectively as the Spanish branch of the International Congresses of Modern Architecture, and corresponding to the M.A.R.S. group in England. The scheme is being financed by the authorities for the relief of unemployment.

Each flat consists of two floors, connected by an internal staircase. The lay-out plan below is taken through an upper floor. Plans of both floors of a pair of flats are given on page 790.



DESIGNED BY G.A.T.E.P.A.C.

WORKMEN'S FLATS IN BARCELONA:



Elevation of single standard bay on the living-room side, with section and details.

SITE. *The site has a frontage of 170 metres on the Avenida de Torras y Bages, a road which is thirty metres wide. This road, which is of great importance for the future of the San Andrés district, runs approximately parallel to the present high road of Ribas (the north-east exit of Barcelona), its object being to relieve the traffic congestion at that point, when the urbanization of the district is entirely completed.*

The scheme is based on the principle that it is essential that workmen's residential districts should be situated in urbanized zones, as near the lines of communication as possible.

Collective dwellings have been projected in order to utilize the site to the best advantage, since the Avenida de Torras y Bages and the large proposed free space make the elevated mode of construction practicable. It is, moreover, an urban solution to the problem, allowing for the installation of the various services described below, which could not be provided unless a definite density was established. According to this scheme, the density obtained is 1,140 inhabitants per hectare.

BUILDING PROGRAMME. *The scheme, taken as a whole, provides for all accessory services, such as baths, co-operative shops, libraries, crèches, workmen's clubs, open spaces for sports, pools, and children's garden with sand patches and small children's pool. Among these social amenities, there is no plan for a school, because there is, facing the site for the proposed block, the municipal school of "Ignasi Iglesias," sufficient to accommodate three hundred school children and having a large playground for the children, which will make extension possible, when the school attendance increases.*

PLANNING. *As may be seen from the plan on the preceding page, access to the flats is obtained through four large staircases with lifts, leading to the galleries*

DESIGNED BY G.A.T.E.P.A.C.

linking the dwellings. These galleries do not pass in front of bedrooms or dining rooms. The kitchens and lavatories, lighted from the galleries, have their windows placed sufficiently high to prevent people from looking into them.

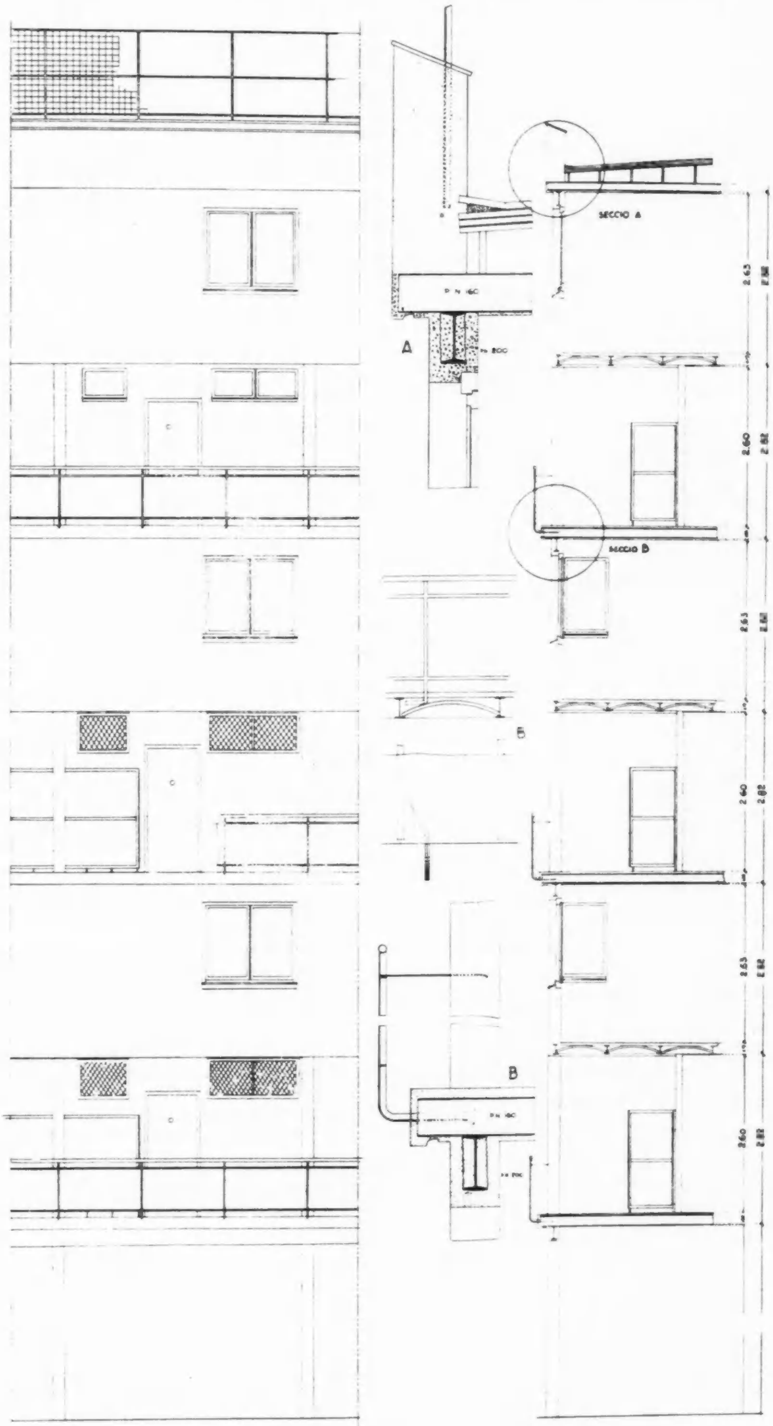
Each dwelling consists, on the lower floor, of a living room, a terrace which can be attached to the living room during the summer (by means of large folding glazed screens), a separate kitchen, a shower, a washstand and w.c., an entrance and a scullery. No common wash-houses have been provided, as they make it necessary for the women to leave their houses, and this makes it more difficult for them to attend to their household duties. On the upper floor are three bedrooms.

The plan does not include any inner yard or court, the dwellings all receiving their light and ventilation direct from the outside. All the dwellings have openings on both faces of the block, making easy cross ventilation.

STRUCTURE. *The structure of the buildings is entirely of rolled steel; in this way, the two functions performed by the walls have been separated:* to support, *a function which is here performed by the steel structure, and* to insulate, *the isolation of which function enables the wall to be entirely in insulating materials, giving it a minimum of thickness and weight, and ultimately resulting in much less load to be carried, and not inconsiderable saving in foundations. Floors are of pre-cast beams in asbestos cement.*

The design of the structure allows a maximum of freedom on the lower floors for the installation of common services, such as clubs, cafés, libraries, premises for co-operatives, etc., which can be constructed after the dwellings have been occupied and the co-operative life of all the tenants has been organized.

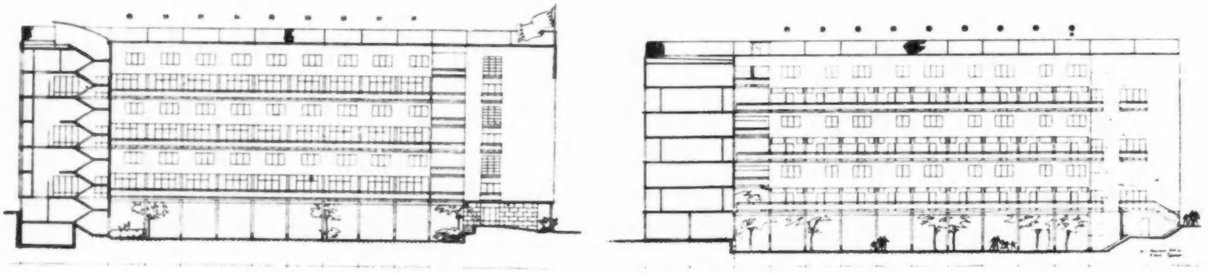
In some of the blocks the stanchions on the lower floor are left entirely free in order to leave open the passage under the blocks.

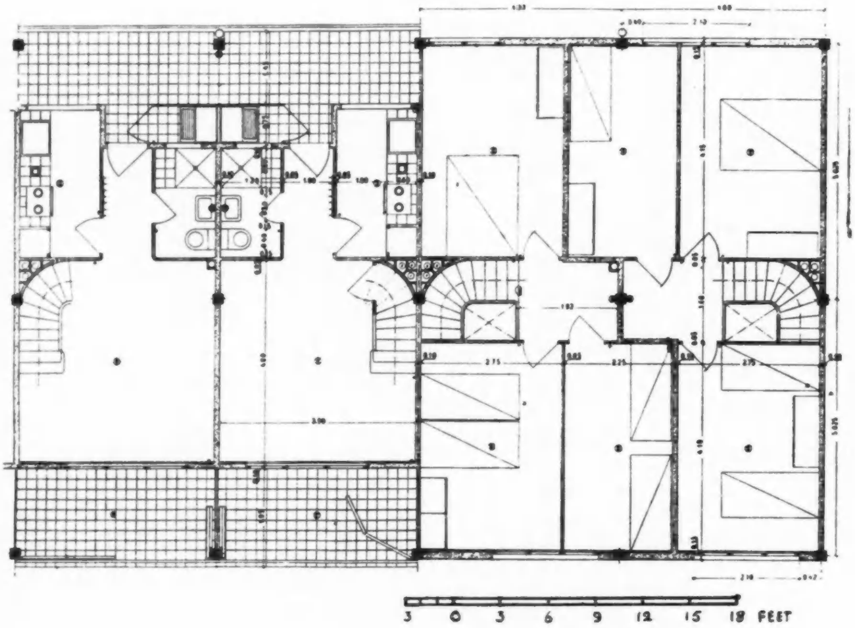


Above: elevation of single standard bay on entrance side. Access galleries, with front doors and kitchen and lavatory windows, are on alternate floors. Also a section through external wall on the entrance side, with enlarged details at parts enclosed by circles.

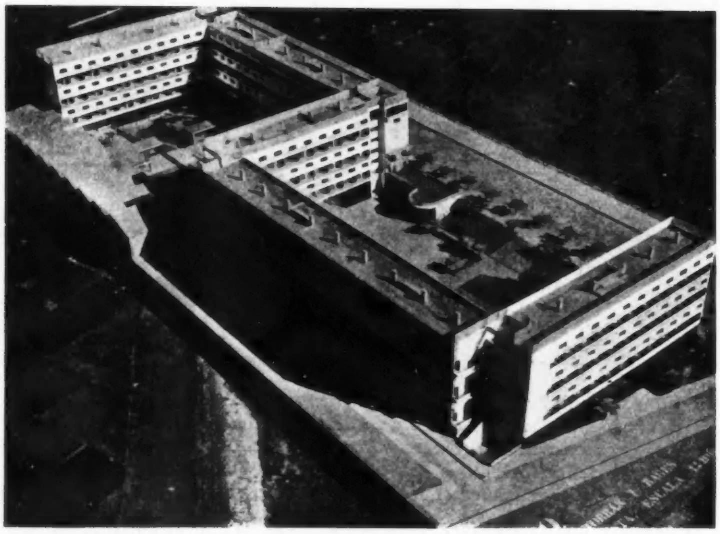
On facing page: elevation of single standard bay on living-room side. Open terraces forming an extension to the living rooms are on alternate floors. At first floor the terrace is shown closed in by folding shutters. Also a section with details through the external wall on this side.

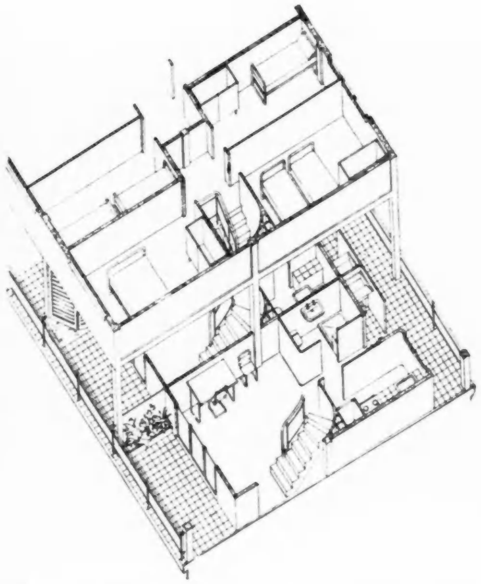
WORKMEN'S FLATS IN BARCELONA





Above: cross sections through the block, showing side elevations of the return wing. Left: detail plan of both floors of a pair of flats, which are standarized throughout the block. The accommodation is described on the preceding pages. Below: a photograph of the model, and an isometric drawing showing the internal arrangement.





DESIGNED BY G.A.T.E.P.A.C.

LETTERS FROM READERS

MAJOR G. B. J. ATHOE
(Secretary, Incorporated Association of Architects and Surveyors)

A. SEYMOUR REEVES, A.R.I.B.A.
(Secretary, Association of Architects, Surveyors and Technical Assistants)

Registration of Assistant Architects

SIR,—Two letters appeared in your correspondence columns on December 7 which appear to me to call for comment in the interests of salaried architects, and particularly young architectural assistants. One letter was from Mr. Wynn Owen, President of the Association of Architects, Surveyors and Technical Assistants, and the other from Mr. McArthur Butler, Registrar of the Architects' Registration Council.

With regard to Mr. Wynn Owen's letter I challenge him to say how either he or his organization "throughout the progress of the Registration Bill through Parliament watched and promoted the interests of salaried men in the profession with the utmost attention," and he might tell us what his organization has done for the Assistant since the passing of the Act. Did it protest when the Registration Council introduced that unfair and penalizing regulation—the ten years' qualification? *It did not.* Nor did it support the Petitions to the Privy Council, made both by myself personally and by the Association of which I am secretary, in regard to that regulation.

Mr. Wynn Owen speaks of the representation on the Registration Council which his organization enjoys; but who made that representation possible? The answer is "The Incorporated Association of Architects and Surveyors." Indeed, the unchallengeable truth is that, whatever has been done in Parliament or on the Registration Council in the interests of the salaried architect and the architectural assistant has been done or initiated mainly by the Incorporated Association.

I have no bias against the A.A.S.T.A. I think that it can perform useful work, but it must stick to its last. I believe that it is a Trades Union; let it perform its functions as such. To perform these successfully it must not be a handmaiden of any other body.

The letter from the Registrar of the Architects' Registration Council of the United Kingdom raises questions of considerable interest to pupils and assistant architects. The Registrar draws attention to an advertisement to the effect that on and after December 31 next admission to the Register will be confined to those who have passed certain recognized examinations.

The Act provided that anyone at its coming-into-force who had practised or was practising as an architect, or, alternatively, anyone possessing the prescribed qualifications, was eligible to be registered.

In the case of assistant architects, the Registration Council (and not the Act) prescribed that a candidate would be entitled to be recognized as practising as an architect if he could submit evidence of ten years' study and practice in architecture. As this was a much severer test than a provision for such men which was eliminated by Parliament from the Act, its authority may be questioned. It was, however, approved by the Privy Council as a positive test of eligibility in the case of assistant architects.

At the request of the Registration Council (whose authority in this matter under the Act may again be questioned), the Privy Council approved the regulation in terms which required the ten years' study and experience to have been fulfilled by January 1, 1932.

The point I wish to make is that, whilst the Privy Council regulation formed a convenient measure of qualification in the case of assistant architects and indicated *positively* those who might apply, it did not *negatively* say that those who could not offer ten years' study and practice by a certain date and who would not therefore now apply, would be for ever afterwards ineligible to apply and ineligible to be admitted to the Register except upon passing an examination recognised by the Council.

If the Registrar is right in the announcement to this effect which he has made, then it is clear that all those students of architecture under the pupilage system who entered upon their studies after 1923, and before 1932, including all those who have since become or have yet to become assistant architects, have been informed in effect that, in passing the Architects' Registration Act, 1931, Parliament decided to exclude them from the scope and advantages of the Act unless and until they rearrange their careers, go to school and pass an examination.

A letter from such a penalized assistant architect is before me as I write, and I am sure that, if every student and assistant architect in similar cases were to communicate with me, my post-bag would not contain less than 2,000 letters and might contain many more; judging by the estimate made as late as 1927 that there were then practically twice as many men entering the profession through study and experience in offices as there were through the schools.

My post-bag shows that the ambiguous character of the Form of Application for Registration is puzzling many would-be applicants. I shall be pleased to assist any of your readers who may be puzzled by the form in completing it if they will communicate with me.

G. B. J. ATHOE

SIR,—It is evident that many Architects' Assistants have not yet realized the importance of becoming registered. I shall be glad if you will allow me to urge those who have not yet done so, to send in their application before December 31, even though their ten years' experience (including pupilage or training) may not have been completed by January 1, 1932.

In addition, it would be helpful if those assistants who wish to become Registered and whose training and experience covers anything from seven to ten years up to and including the 31st of this month, will communicate with me or with Mr. L. A. F. Ireland (A.A.S.T.A. Representative on the Architects' Registration Council).

A. SEYMOUR REEVES

CONCERT HALL FOR BRIDLINGTON

The Bridlington Town Council have decided to build a new concert-hall, costing £45,000, to be completed by July 1, 1934. The hall will accommodate 2,300 people, and every seat will have an uninterrupted sea view.

FILM: ARCHITECTS' CONGRESS

Eight "stills" from the film, Architects' Congress, *made by Professor L. Moholy-Nagy as a diary of the fourth Congress of the C.I.A.M., and exhibited in London last week by the Film Society.*

The Congress was held last summer on board the s.s. "Patris II," cruising in the Mediterranean and visiting Athens and the Greek Islands. England was represented by delegates from the M.A.R.S. (Modern Architectural Research) group.

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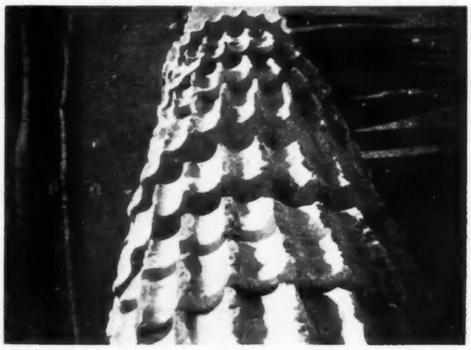

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1. *Architects on the deck of s.s. "Patris II," leaving Marseilles, July 29.*
2. *S.S. "Patris II" entering the Corinth Canal, July 31.*
3. *Delegates in* seance *on the Mediterranean.*
4. *Arrival at Piraeus for Athens.*
5. *Temple of Jupiter, Athens.*
6. *A fallen column, Temple of Jupiter.*
7. *J. Louis Sert, Spanish delegate.*
8. *Alfred Roth, Swiss delegate.*

Another shot from the film is given as this week's frontispiece.

BY MOHOLY-NAGY

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may in the course of time indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems.—Crown Copyright Reserved.

Cleaning of Stonework

¶ *AN architect asked whether the Station would recommend the use of chemicals for cleaning a stone building. The building in question had been exposed to a sooty atmosphere for a number of years without being cleaned and was extremely dirty.*

The cleaning of stonework has been dealt with at length in Building Research Special Report No. 18, *The Weathering of Natural Building Stones* (published by H.M. Stationery Office, price 4s. 6d. net).

Three methods are frequently adopted :—

1. Washing with plain water.
2. Steam cleaning.
3. Cleaning with chemical compounds.

There is no doubt that the third method, which involves the use of chemicals, is definitely to be avoided, for although at first sight it may appear to be successful in that a very clean appearance can be obtained, it is quite certain that in most cases the stone will subsequently deteriorate rapidly as a result of the treatment. The use of alkalies such as "soda ash," caustic soda or sodium peroxide, or of "soap powders," or any preparations of undisclosed composition, which almost invariably contain alkalies, is especially dangerous and should never be allowed.

Thorough washing with plain water is the safest method and if a satisfactory result can be obtained with this it should be used. The steam cleaning process has fallen into disrepute largely owing to the custom of using chemicals in conjunction with it, but there is little doubt that this method can be safely used if the work is entrusted to a reputable firm and the use of all chemicals definitely prohibited.

In the present instance, as the building is reported to be in a very dirty condition, it is suggested that it should be cleaned by the steam process in the first place and subsequently washed down with water at regular intervals, say, once a year. This would not only keep the building clean but also provide the best preservative treatment that is known.

Disintegration of Concrete Under Tennis Courts

¶ *THE asphalt finish of some tennis courts had formed into ridges and when the asphalt was broken up for repairs the concrete underneath appeared to be chemically attacked. A sample of the concrete was forwarded to the Station and advice was asked as to the cause of the trouble.*

A superficial examination of the specimen of concrete suggests that it has been badly attacked by sulphates, since small white spots visible throughout appear to be composed of calcium sulphoaluminate, the product of the action of sulphate on set cement. This action would lead to expansion and the consequent formation of ridges in the asphalt.

Without an inspection of the site it is difficult to give a definite opinion as to the source of the sulphates and the best method of preventing a recurrence of the trouble. It is possible that the sulphates were derived from the soil but it seems more likely that they originated in the hard core filling or in some admixture to the concrete. The trouble may have been due to the presence of a high proportion of sulphate in crushed brick used for the hard core, or to the use as aggregate of crushed old bricks to which pieces of calcium sulphate plaster were still adhering.

In renewing the work a well-made dense concrete should be used and a mix consisting of 1 part of Portland cement, 3 parts well graded sand and 6 parts gravel aggregate, proportioned by volume is suggested as suitable for the purpose.

If the sulphates are derived from the hard core it would, of course, be desirable to replace this with clean crushed stone or brick known to be free from sulphates.

"Blowing" of Lime Plaster

¶ *AN architect sent a sample of plaster and asked the opinion of the Station as to the cause of the "blowing" which had occurred. It was stated that the coarse stuff was composed of ground high calcium quicklime and sand, mixed in the proportion of 1 : 3 and the finishing coat of lime putty and sand in equal parts. The lime was slaked in a pit and there was very little residue after slaking. The same lime was used for both coarse stuff and setting coats.*

The "blowing" developed within a month of the completion of the plastering and the work was subsequently treated by thorougly soaking all the surfaces of the plaster, rubbing down to remove all loose particles, and filling with a calcium sulphate plaster. The surface was allowed to dry and when examined after a few days it appeared satisfactory. A distemper finish was, therefore, applied but within a month the defects reappeared, and after two months the whole of the walls and ceilings were affected.

This appears to be a typical case of "popping" and "pitting" due to the use of a lime containing slow-slaking particles, which subsequently slake in the wall and expand. An intensive steaming test of the sample shows that there are some incompletely slaked particles still remaining. The storage of the putty in the pit has not sufficed to render them harmless. There would seem to be no remedy in a case of this sort, other than waiting for the trouble to stop or else stripping the finishing coat and renewing.

There is always some danger in using a ground quicklime for a finishing coat that unsound material may be present. Even a high calcium lime may contain over-burnt portions and partly sintered material where impurities, fuel ash and kiln lining, etc., have combined with the lime. These potentially dangerous and slow slaking portions are more easily separated during slaking if the lime is in lump form and the product is screened on a fine sieve before admitting it to the maturing pit ; such unsound portions as remain can settle to the bottom of the pit during the first period of storage and be avoided when taking putty for the finishing coat. If the lime is ground before slaking it is obviously more difficult to separate the impurities.

Flaking of Brickwork under Rendering

¶ *A CONTRACTOR asked for an explanation of the failure of a cement rendering. A large area of wall had been rendered with a 3 : 1 mix of washed sand and cement ; the finishing coat was similar but with the addition of 3 per cent. of a proprietary waterproofer, mixed according to the makers' instructions. In a number of places the rendering had cracked and come away in fragments, pulling with it pieces of brick. The building was in an exposed position on a sea front and the failures had occurred in very exposed places, such as projecting courses of chimneys and copings to parapet walls.*

A specimen of one of the bricks together with a piece of the rendering adhering to it was sent to the Station and it was suggested that the trouble might be due to the bricks. It was known that, owing to the job being rushed, a load of underburnt bricks had been allowed to get into the work.

A cement rendering will expand and contract to a considerable degree with changes of moisture content, and the cracking of renderings is usually the result of such movements. The trouble is greatest in places such as parapets and the tops of chimneys where the greatest changes in moisture content are to be expected. It seems likely that in this case the trouble has been caused by such moisture movements. Usually, where the rendering has been applied to hard bricks, the failure takes the form of cracking, and possibly a breakdown of the adhesion of the rendering. In this instance, however, there is a very good bond between the rendering and the wall, and in addition, judging from the specimens sent, some of the bricks are underburnt and extremely soft. The result is that instead of merely separating from the wall the rendering tears away flakes of the soft bricks.

Frost action may have played a part in developing the failure, but it is thought that the major cause is probably the purely mechanical one described. Other failures of a similar kind have been reported to the Station. It appears, therefore, that some care is necessary in choosing bricks for work of this kind and that it is not sufficient to assume that if a wall is to be rendered any quality of brick will be good enough as a background.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

The National Housing Corporation

AN overwhelming but unsuccessful demand was made in the House of Lords last week for the creation of a National Housing Corporation.

The debate was initiated by the Bishop of Winchester, who asked the Government to state :—

(1) The number of houses to be let at an inclusive rental not exceeding 10s. a week, required for the accommodation of those now living in the slums or in overcrowded conditions ;

(2) The number of such houses which the Government estimated would be provided (*a*) by the local authorities under the five-year slum clearance scheme ; (*b*) by local authorities without a subsidy ; and (*c*) by private enterprise ; and

(3) If the Government proposed to take action in accordance with the recommendations of the Moyne Report ?

He said that there were many doubts whether the Government's slum clearance policy was comprehensive enough. In his inaugural address to the R.I.B.A., Sir R. Unwin, the president, said that in addition to 750,000 houses required to make up the deficiency, he estimated that there were 500,000 not fit to live in and another 500,000 far below the decent standard they would like to see. THE ARCHITECTS' JOURNAL, after an investigation of conditions in most of our large towns and basing the results on the figures of the Census, had come to the conclusion that 1,400,000 houses were required. A lower figure was given by *The Times*, which said : "It is safe to say that the ideal is the provision of at least 1,000,000 houses to be let at an inclusive rent of 10s. a week." Towards this total, in five years, 84,000 would be provided by the Wheatley subsidy ; 210,000 by the 1930 Act ; 160,000 by private enterprise, and 11,000 by local authorities. That gave an aggregate of 465,000. Against this must be set the fact that year by year houses were deteriorating, and a large number of new families estimated by *The Economist* at 200,000, would come into existence, requiring accommodation. It looked as if at the end of five years, comparatively little advance would have been made in providing houses for those who required them.

He did not ask the Government to reverse their policy, but to strengthen, widen and build upon it. The Minister of Health should make it clear to local authorities that he did not propose to discourage them building when private enterprise had failed to provide the necessary houses. There was a feeling that the Ministry would not easily pass schemes for new houses submitted by the local authorities.

He urged the Government to take action on the lines of the Moyne Report, and to consider more carefully the arguments for a national housing corporation which would be able to act where local authorities and private enterprise failed.

The Bishop of London supported his colleague on the episcopal bench, and condemned the speculative builder. Nor did he trust the smaller local authorities, but he urged the formation of a national housing corporation.

Lord Reading also took much the same line, and said that the Moyne Committee's recommendations were in relation to conditioning, and did not really deal with the problem of a national housing corporation. A great housing drive would, by the relief of unemployment, save money in the end. He appealed to the Government not to let this opportunity pass, but to deal with this national problem as a National Government.

Lord Listowel and Lord Balfour of Burleigh both expressed doubts of the adequacy of the Government's programme. Lord Moyne declared that a national housing corporation could not fail to exercise a very deterrent and probably destructive effect on private enterprise. If it displaced existing effort, it would completely vitiate the figures about employment that had been used in the debate, because there would be considerable slackening while the new organization was getting into its stride. He did not think that any of them felt satisfied that private enterprise was capable of dealing with this very difficult problem, but none of them really knew, because private enterprise had not had an effective run since 1910. There was a tremendous drop in building after Mr. Lloyd George's budget of that year, and then the war came and the disorganization had continued. Private enterprise was now re-entering the field, however, and it seemed a peculiarly favourable moment to try it out, as was the policy of the Government. Interest rates and costs of building were down, and private enterprise would operate under very different conditions from those which existed in the first decade of the century. Some unfortunate results of private enterprise might be avoided under the new conditions.

Lord Noel-Buxton urged that adequate powers for the unified planning of London should be conferred on a Central London authority.

Lord Daryington and Lord Trent also advocated the creation of a National Housing Corporation. The latter favoured the formation of a body on the lines of the Central Electricity Board, or the London Passenger Transport Board, that could take a long view. The problem was too large to be left to private enterprise.

Lord Dynevor said that there ought to be a national housing board, with full powers to deal with the slums in both town and country. The only way the Government would come in would be in the raising of a patriotic housing loan of £100,000,000, bearing interest at 2 per cent. or not more than 2½ per cent., free of income tax and surtax. There would possibly be a sinking fund of ¼ or ½ per cent. The Press should be asked to carry out propaganda for three days, and on the last day the Prince of Wales should be asked to make a broadcast appeal to the nation to subscribe the money. The national housing board would find the interest, £2,000,000 a year plus the sinking fund, and the loan should be spread over a very long period to keep the sinking fund as low as possible. The Exchequer would not necessarily lose by the interest being free of income tax, because as fast as houses were built by the national housing board, they would all have to pay Schedule A income tax. This would, indeed, be a new source of revenue for the Chancellor of the Exchequer. As to compensation, insanitary property or houses unfit for habitation, should only receive site value, but where houses were well maintained and in good condition, but in bad environment, death duty value should be fixed.

The Government's reply, entrusted to Lord Gage, was disappointing. The noble lord said that so far the local authorities had submitted that 210,000 houses ought to be pulled down during the next five years. If that were done, and the inhabitants housed properly elsewhere, a very great deal would have been effected. The Government were opposed to any return to a subsidy. But the Government were determined to make progress, and the Minister of Health was satisfied that they had taken the course best calculated to promote the supply of small houses to let. Any disturbance due to the cessation of the Wheatley subsidy had been guarded against as carefully as possible. It would be impossible at present to give accurate figures of the new houses that were let without a house-to-house inquiry. With regard to the building societies' scheme, he could add little to the statement made by the Minister of Health the other day. At least 35 societies, with aggregate funds amounting to £236,000,000, were prepared to operate under the Act. An encouraging beginning had been made, and the fact that an additional 30,000 houses had been built this year over and above the average for the preceding two years, was an encouraging sign for the future. A very important change had been brought about by the pool of "C" houses which the Government had decided to maintain for the next five years. There would be no necessity for people who had no other incentive to remain in an overcrowded locality to be afraid of their rents being raised if they went somewhere else. In view of this fact, the Ministry felt that the more rigid application of bye-laws and even the revision of existing bye-laws might be contemplated in certain circumstances as a remedy. With regard to the building of houses without subsidy by local authorities, houses to be rented at 10s. weekly inclusive, could be built by most municipalities on an economic basis without a subsidy. That constituted a very important safeguard. The suspicion that the Ministry had been trying to prevent local authorities exercising this power was due to a misunderstanding. What reason was there for assuming that a National Housing Board would be able to build more cheaply than the local authorities ? Would not an institution of that sort interfere very largely with the programme of the Ministry of Health ? Although the Government had not yet solved the question of how to build the cheapest house on the most expensive site, at least it was calculated that on land up to £6,000 an acre, tenements could be constructed to let at 10s. a week inclusive. He suggested that the Government's policy was more worthy of their lordships' support and more in the interests of those they were desiring to help than a policy which might raise housing costs and place on the shoulders of industry a large additional burden.

After the Bishop of Winchester had expressed grave disappointment with the Government replies, the debate ended.

●

SLUM

A cheap edition of *Slum : Its Story and Solution*, by Major Harry Barnes, F.R.I.B.A., is to be issued within the next few weeks.

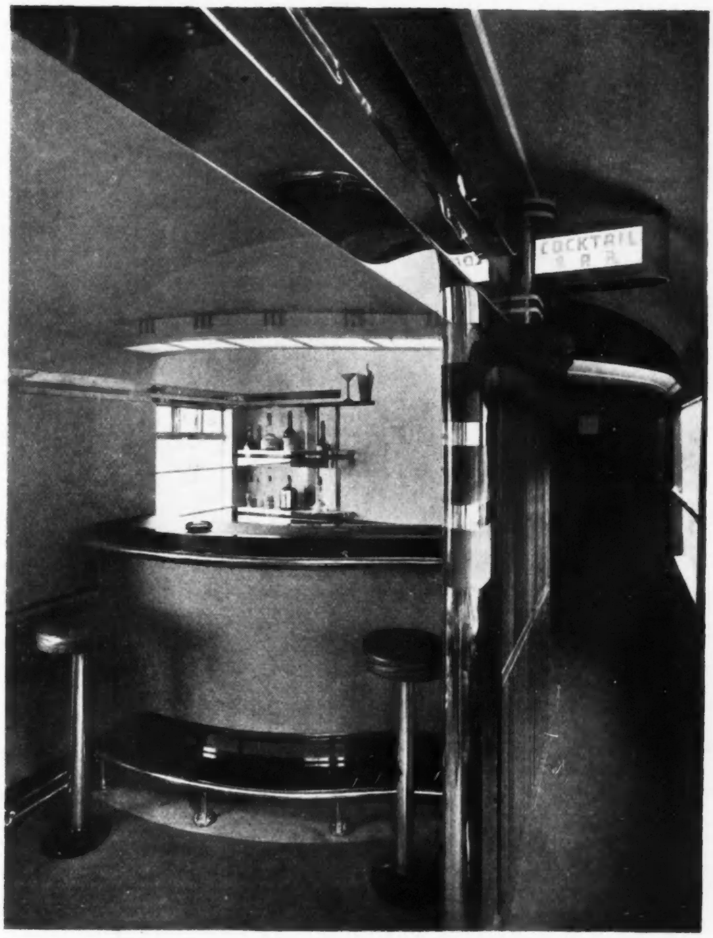
HOUSING DIRECTOR FOR LEEDS

The new Housing Committee of the Leeds Corporation proposes, within the next few weeks, to appoint a housing director for Leeds. The post will be advertised, and the applicants must be registered architects with previous experience under a housing authority.

THE FLYING SCOTSMAN: L.N.E.R.

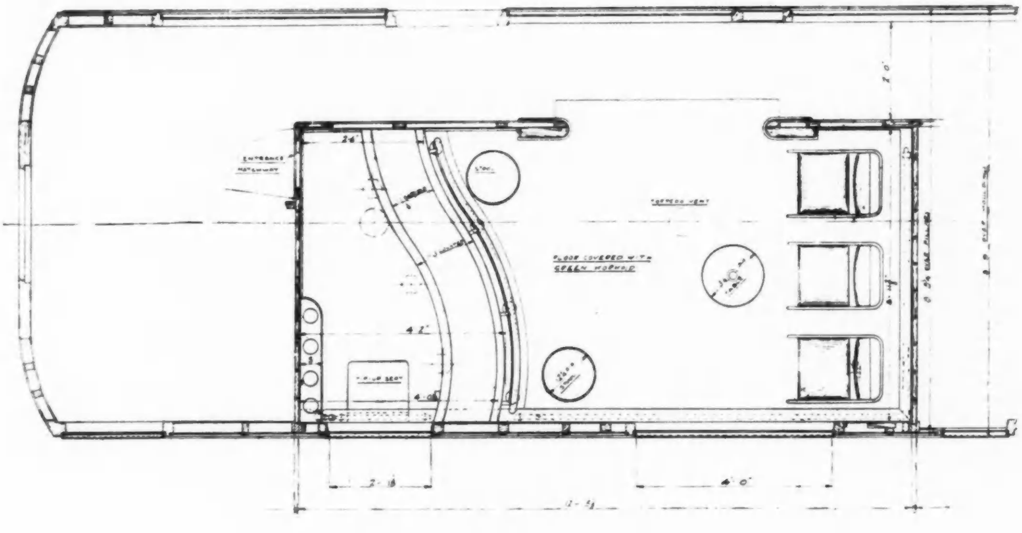
Cocktail Bar and Buffet

DESIGNED BY CAMERON KIRBY



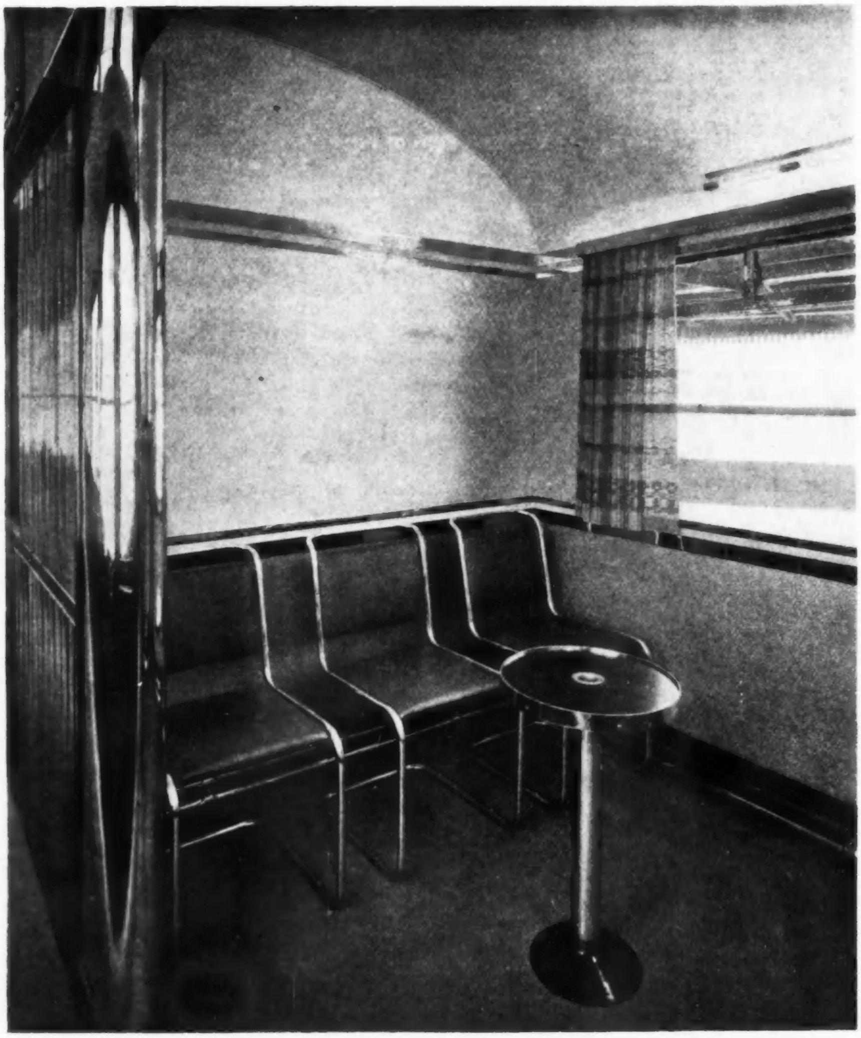
This is the first introduction of a cocktail bar as part of the equipment of a railway train. It has been designed for the London and North Eastern Railway as an additional unit in the permanent make-up of the Flying Scotsman, running between London and Edinburgh.

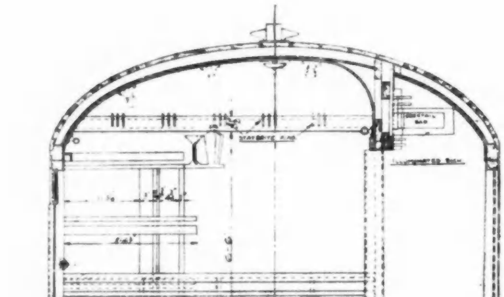
As can be seen in the plan below, the cocktail bar is in the form of a recess off the corridor, near one end of a coach. The photograph shows the counter viewed through the entrance. The side and soffit of the entrance and all other metal-work is in stainless steel.



PLAN

THE FLYING SCOTSMAN,





CROSS SECTION LOOKING ON COUNTER

Above : The cocktail bar looking away from the counter. It is lit by the window seen in the photograph, by strip lights over the entrance and through a row of glass panels over the counter. Left : A section, looking towards the counter. On the opposite page : Longitudinal sections through the cocktail bar.

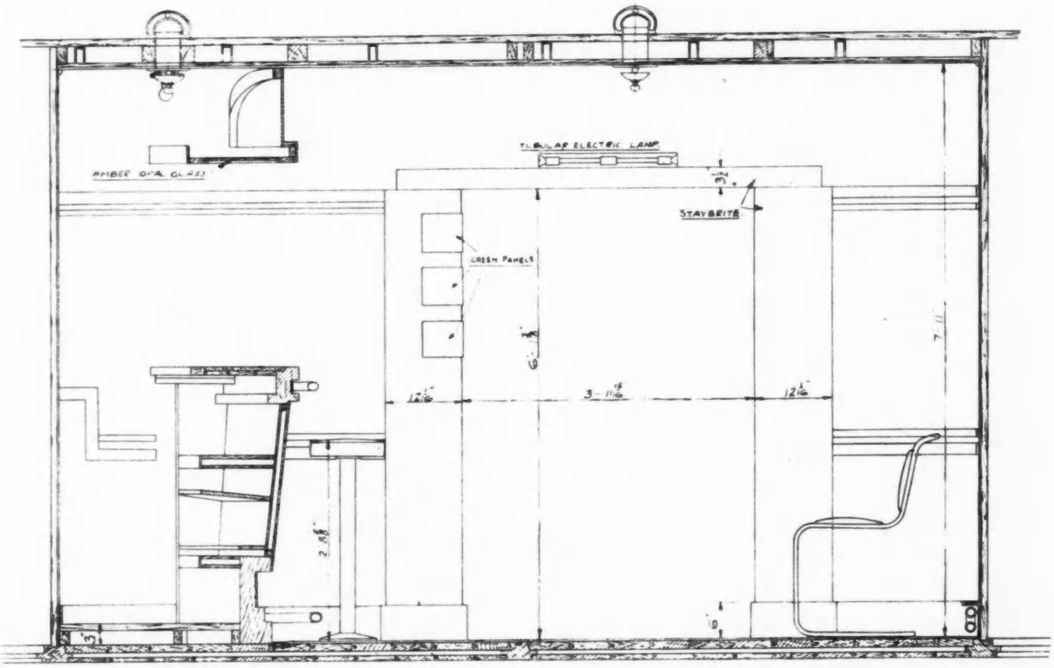
A buffet coach, designed by the same architect, is illustrated on pages 798-799.

DESIGNED

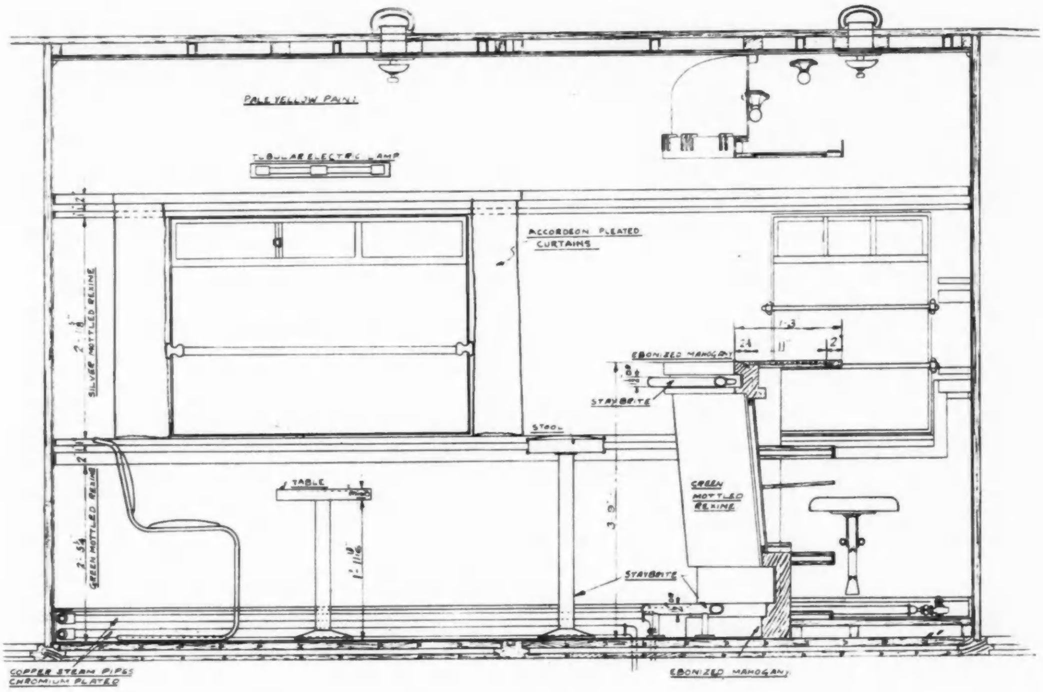
BY

CAMERON KIRBY

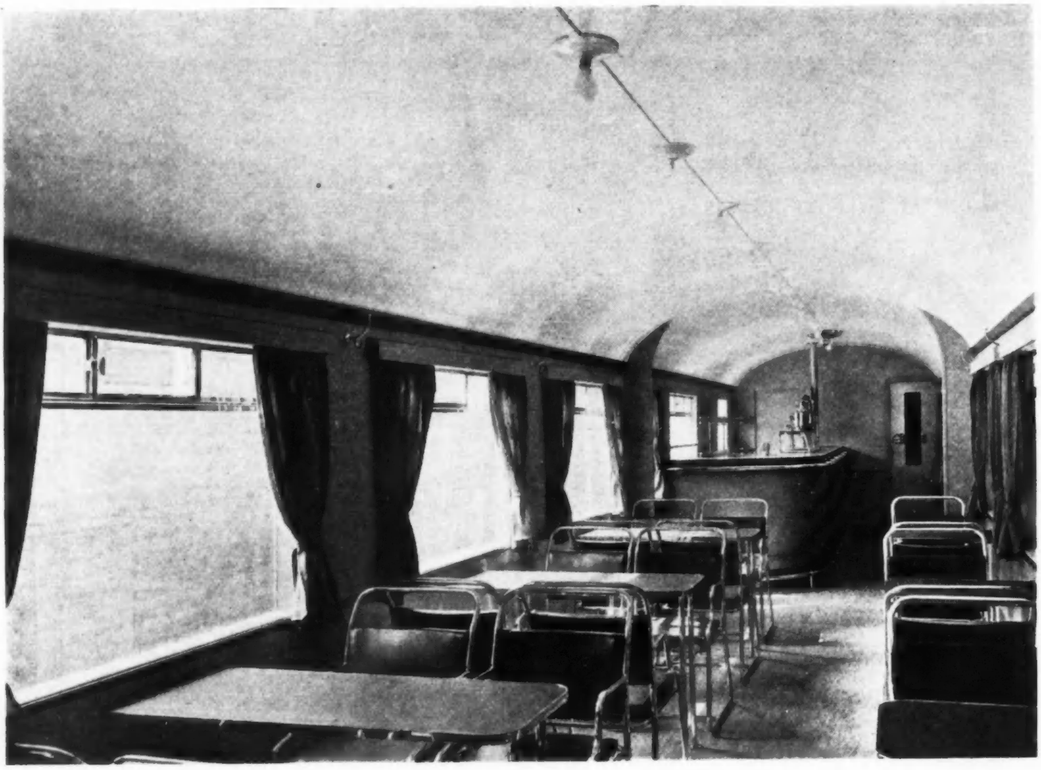
L.N.E.R.: THE COCKTAIL BAR

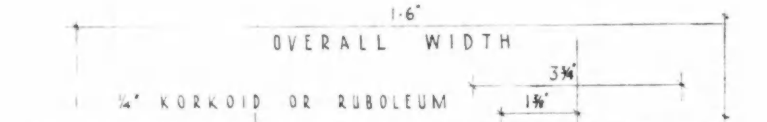

TUBULAR ELECTRIC LAMP
AMBER OPAL GLASS
STAYBRITE
GREEN PANELS
3½
6'-3"
7'-11"
12 1/16"
3'-11 1/16"
12 1/16"
2'-8 5/8"
3"
10

LONGITUDINAL SECTION LOOKING TOWARDS CORRIDOR


PALE YELLOW PAINT
TUBULAR ELECTRIC LAMP
ACCORDEON PLEATED CURTAINS
SILVER MOTTLED REXINE
2'-1 1/8"
1'-3
2A
11"
2"
EBONIZED MAHOGANY
STAYBRITE
STOOL
TABLE
GREEN MOTTLED REXINE
2'-5¼
GREEN MOTTLED REXINE
1'-11 1/8"
3'-9"
STAYBRITE
COPPER STEAM PIPES CHROMIUM PLATED
EBONIZED MAHOGANY

LONGITUDINAL SECTION LOOKING FROM CORRIDOR

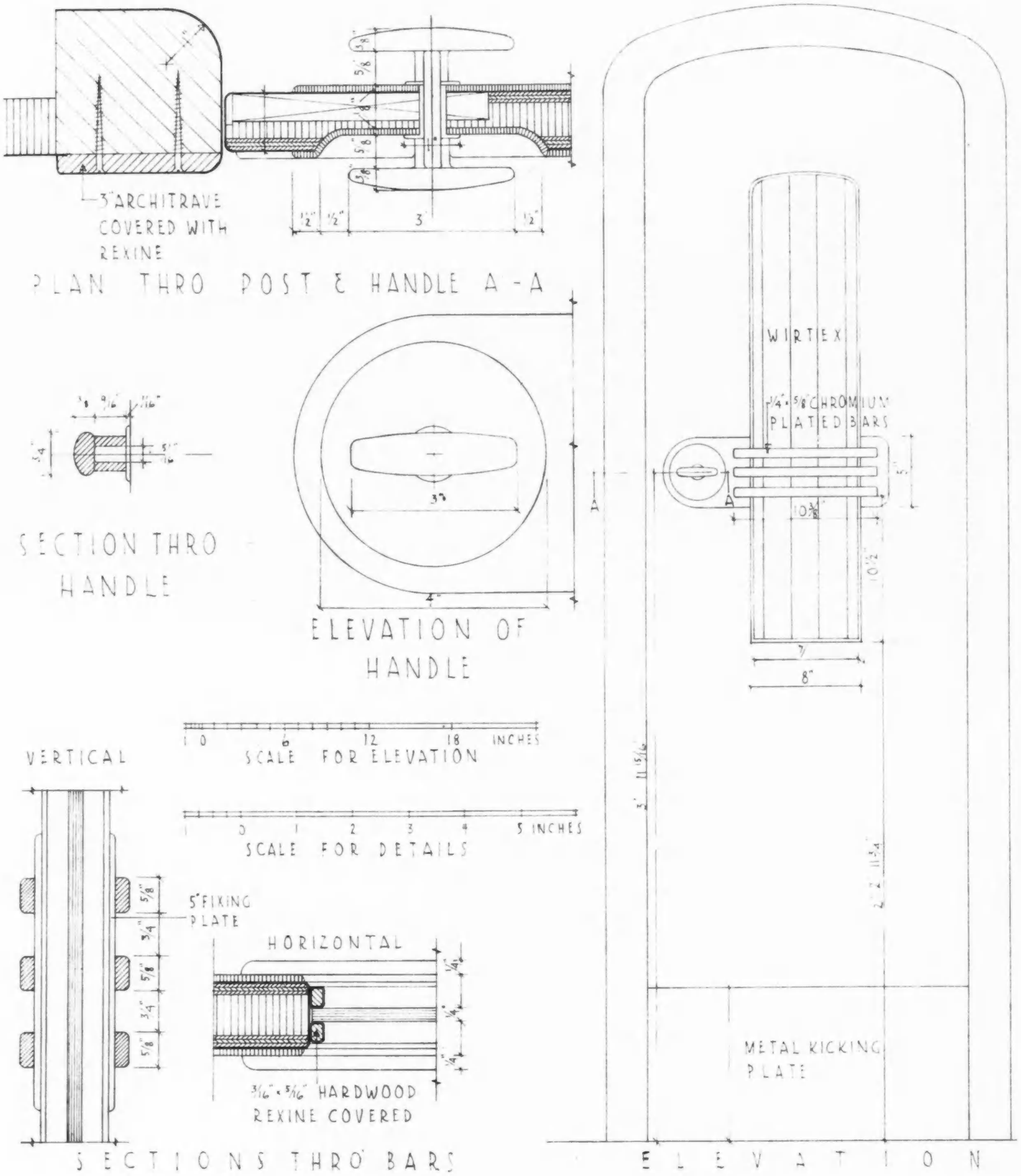




1·6"
OVERALL WIDTH
3¾"
1⅞"
¼" KORKOID OR RUBOLEUM
1" × ⅛"
C P METAL STRIP
3 ¾"
¾" IBUS BOARD
METAL TUBE
1½"
TAPPED LUGS
¼"
1¾"
TABLE TOP FIXING PLATE
FIXING RING
3½"
3½"
3¼"
VULCANISED RUBBER
1½"
ASHTRAY
3½"
¼" KORKOID OR RUBOLEUM
SCALE
INCHES
ALL SHOW METAL CHROMIUM PLATED

A third class buffet car designed for general use on the L.N.E.R. by the same architect. Above: a photograph looking along the car, showing the tubular steel chairs and tables, and the buffet counter at the end. Left: constructional details of the tables shown above.

L.N.E.R. THIRD CLASS BUFFET CAR


3" ARCHITRAVE COVERED WITH REXINE
PLAN THRO POST & HANDLE A-A
SECTION THRO HANDLE
ELEVATION OF HANDLE
WIRTEX
1/4" × 5/8" CHROMIUM PLATED BARS
SCALE FOR ELEVATION
0 6 12 18 INCHES
SCALE FOR DETAILS
0 1 2 3 4 5 INCHES
VERTICAL
5" FIXING PLATE
HORIZONTAL
3/16" × 5/16" HARDWOOD REXINE COVERED
METAL KICKING PLATE
SECTIONS THRO' BARS
ELEVATION

Constructional details of the door to the buffet car. The door is seen standing open beside the counter in the photograph on the opposite page.

DESIGNED BY CAMERON KIRBY

LITERATURE

INFORMATION

[*By E. A. A. ROWSE*]

Vice-Principal of the A. A. School of Architecture.

The Information Book of Sir John Burnet, Tait and Lorne. London : The Architectural Press. Price 25s. net.

By many it is thought that the modern, or contemporary, expression of architecture is in danger of becoming—even has become—discredited by mis-use. Much has been heard of the modern movement ; but it is doubtful if many have a clear understanding of what is meant by this term.

The recent Milan Exhibition caused many to pause and think. Disturbing doubts were raised by the use in hot, sunny Italy of the long horizontal and vertical windows, which may be suitable, climatically speaking, to the misty, sun-starved countries of Northern Europe. Mere copying is not modernism. In this country there is a danger—discouraging in the last degree to contemplate—that the sketch book habit of the nineteenth century is again becoming only too prevalent. This springs from a lack of understanding of the real roots of architectural expression. These are our climate, physical habits, laws, mental junctions and spiritual ideals ; all of which differ for each and every nation.

The architect should seek sincerely to understand all those varying conditions, which go to make the life of his own time. It is to be doubted whether we in this country have been making an effort to do this. The appearance of this *Information Book* shows, however, that one great firm, at least, is able to express very clearly its credo in architectural faiths. To understand any subject presupposes the collection on scientific lines of an enormous mass of apparently unrelated facts, and their subsequent co-ordination into an intelligible, usable basis, upon which a line of derivative reasoning may be founded, which shall end in the correct solution of the problem.

With their eyes on the future and not on the past, the authors of the book seek to create in the minds of those who work with or under them a fine team spirit, which has resulted in the best architectural organization in this country and in complete co-operation between principals and staff.

Coming from such a source, the book should be of immense interest to all who seek to accomplish a similar result. For only on this basis can the immense volume of detail research work necessary to modern architecture be accomplished ; not to mention the recording of it in a form quickly intelligible for future reference.

The creation of a community of outlook ; the organization of an elastic research department, which will contribute progressively to the reservoir of knowledge ; the ensuring that the information shall be used, are all requirements which are outlined with great clarity in the opening paragraphs.

But it must be remembered that one of the pre-requisites of such a line of procedure is the employment of a much larger staff than is normal in most British offices. American practice underlies many of the proposals in this book. However, it may be argued that the adoption of such a regime accounts for the undoubted success—even in recent conditions of depression—which the authors have enjoyed.

The methods of storing old plans in steel containers, the evident and unusual order imparted to the sample room and library, the direction that all drawings must be returned to the file at the end of the day, are but a few of the excellent " tips " to be gained from reading the book.

It is not, however, the introductory portion on office management and procedure that gives the book its importance, but the collection of drawings that follow. These are in the form of Information Sheets—prepared for use in Sir John Burnet, Tait and Lorne's office, but applicable to all offices. Each Sheet contains the necessary factual data on a specific subject arranged in the concisest way possible, in diagrammatic or tabulated form. Some subjects need several Sheets ; some are covered in one. There are altogether about 150 in the book, and the subjects range from reinforced concrete stairs to the turning space required for different types of motor-car.

No doubt many other fields will be, and are being, explored in the same thorough way. The small self-contained flat, for example, is no doubt receiving attention. It is to be wondered, too, if there does not exist already some research into the functional sequences which underlie the intricacies of banking ; such examination being quite capable of representation on the same excellent lines used to follow food travel in a kitchen. Somewhat heavy emphasis is here laid on the sporting side of life. The various forms of playing fields might have been compressed into fewer Sheets, to allow for a greater development of those needed for exploring—the projection room of a cinema, may we suggest ; but we must not forget that the Sheets in this book are only a beginning. The book represents the first and

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THE ARCHITECTS' JOURNAL
Library of Planned Information

We have received a number of letters from our readers in regard to the new Library of Planned Information. Its general aims can be re-stated briefly.

THE INCEPTION
of the Library grew out of Sir John Burnet, Tait and Lorne's Information Book which is reviewed on this page. But the number of subjects which can and should be dealt with by Information Sheets is naturally far greater than that which can be covered in one book, full as this book is. Hence the Library. The book itself is the model for, and the cornerstone of, the Library ; and Sir John Burnet, Tait and Lorne have consented to act as editors of the Library.

THE UNIT
of the library is the Information Sheet. Briefly, the object of the Information Sheet is to give :—

> *The vital facts about a given subject in a standardized form which can be quickly mobilized for reference, easily handled and easily stored.*

THE AIM
of the Library is to build up by means of Information Sheets a complete service of vital information regarding every method, product, and process used in the practice of building.

THE ORGANIZATION
of the Library falls under two main heads.

1. Information on Planning.
2. Information on Materials.

Planning
is used in the widest sense to cover those technical methods and data which impinge upon design. In fact, every kind of information about building which is capable of convenient reduction to graphic form. It includes such matters as the method of setting out auditorium floors in cinemas, the lighting of classrooms, and the cost of various types of buildings, all of which will shortly be dealt with.

Materials
covers every kind of product and accessory, from bricks to light bulbs. In modern architectural practice the designer must have a mass of variegated knowledge at his elbow ; he must know all about actual *things*, their sizes, weights, characteristics, methods of application. He must have the means of immediate reference to all those preliminary facts about materials and their uses which will dictate his choice of method and facilitate design. And these must be in a convenient form for constant reference. But the expert on materials is not the architect but the manufacturer—the man who makes the stuff. The manufacturer has therefore been asked to co-operate in this section of the Library by producing all the vital data regarding his products. This is reduced under the editorship of Sir John Burnet, Tait and Lorne into Information Sheet form.

For the collection of the Sheets a spring-back folder is advocated, one folder to each sub-section, and at regular intervals a complete index will be published.

only evidence that we in Britain are on the right lines and its publication, by the astoundingly generous permission of its authors, is a sign of hope and an incitement to emulate so stimulating an example.

The Information Sheets form a new and scientific method of collecting and—more important—storing information, and can obviously be made the basis of a complete library on the same lines.

This is, in fact, I understand, being done; for THE ARCHITECTS' JOURNAL have already begun to build up on the foundation of these Sheets their Library of Planned Information, under the editorship of the authors of this book, to complete the collection whose value the present series demonstrates.

THE NEED FOR A NATIONAL HOUSING CORPORATION

[*By W. P. KEEN*]

Slum. By Howard Marshall, in collaboration with Miss Avice Trevelyan. London: Heinemann, Ltd. Price 3s. 6d.

IT is hoped that public interest in the slum problem is not beginning to wane. Since April last, when Sir Hilton Young, the Minister of Health, launched his five-year plan, we have been told, time and again, the story of the slums. Experts have deluged us with statistics; the newspapers have featured it on every possible occasion; and the B.B.C. have used the air to bring home to every British citizen the horrors of slum life.

Obviously the public by themselves can do nothing to remove the slum areas. Surely the responsibility for the most pressing problem of the day lies with the Government, *and the Government alone.* Sir Hilton Young claims, on behalf of the Government, that his five-year plan is the answer to the riddle; but we must not delude ourselves that his slum clearance crusade will necessarily end in a triumphant victory. As the Bishop of Winchester, in the House of Lords, last week, said: "There are many doubts and hesitations as to whether it is wise and comprehensive enough for the problem it is intended to solve. . . It looks as if, at the end of five years, comparatively little advance will have been made in providing houses for those who require them."

Housing is *not* the responsibility of politicians. Would it not be better for the Government to hand over their burden to a National Housing Corporation? Such a body has been mooted on several occasions, and the authors of this book strongly advocate this policy. They contend that housing should be regarded as a national emergency, and that the only way of dealing with the triple problem presented by overcrowding, poverty and structural deterioration is to establish such a Corporation, backed financially by a Government guarantee.

> "At present progress is hindered at every turn because there is no concentrated drive from the centre. The Ministry of Health has other cares besides housing; The local authorities cannot devote their whole attention to the slums. This question of the part to be played by local authorities in housing is crucial, and we can assert immediately that some local authorities are far from disinterested and extremely inefficient, and it is clear that all housing questions should immediately be taken out of their hands. What is more, it is entirely wrong that housing and local politics should be mixed together, and on this score alone there are sufficient grounds for suggesting that local authorities should be relieved of their responsibilities. If to this we add the fact that local authorities, dealing with relatively small housing schemes, could not hope to compete where cost is concerned with a National Housing Corporation, the argument is almost complete."

The suggested duties of the proposed Corporation are set out as follows:

> "The National Housing Corporation could borrow large sums of money very cheaply—there would, I think, be no difficulty whatever in raising a housing loan of any size, even at a small rate of interest, backed by a Government guarantee: the Corporation could take due precautions to ensure that prices would not be sent up by large orders: it would operate on so large a scale that the building industry would be kept continuously employed; it could obtain greatest economies for bulk purchases. Prices, indeed, would be lowered, for the Housing Corporation would certainly bring pressure to bear on the badly-needed reorganization of the building industry, and thousands of unemployed men would be permanently absorbed.
>
> "It would, moreover, carry out research into new methods of buildings and, without too rigid standardization, enormous reductions could be effected in the cost of working-class houses. Even now, it would be possible to produce a perfectly adequate house to let at an inclusive rent of 10s.; a Housing Corporation, by mass-production methods and a consequent reduction in overheads and waste, could in time lower that rent appreciably.
>
> "Only in this way can we hope to tackle efficiently a vast and complex problem; only in this way can we hope to reconcile or over-ride conflicting interests and policies."

The formation of a Housing Corporation should eliminate the mistakes of the past: the unco-ordinated clearance, re-conditioning and re-planning in bits and pieces, especially in London and the larger cities. It should enable the execution of a progressive policy, based upon uninterrupted experiment and experience; a policy which could only be safeguarded and fostered by an organization protected, as far as possible, from political interference.

We must look to the past in order to judge our mistakes. In reviewing the housing campaign during the last fourteen years, the authors point out that we are inevitably impressed by the fact that two million houses have been built, but it comes as rather a shock to realize that over a million of these houses are subsidized, and that their capital cost has been approximately £651,000,000.

> "We shall not discharge our liability upon these houses completely for another fifty years, and we are now paying for them at a rate of £16,000,000 a year in rates and taxes. We may admit, then, that the number of houses built represents a remarkable achievement, but we could face the expense it involves more happily if we felt that we were paying to improve the conditions of life in the slums. Actually the vast sums of money which have been spent, and will be spent, are mainly being devoted to housing the artisan class and also to accommodate people who could well afford to pay an economic rent."

So much for the constructive side of the book. The section of the book dealing with the human side, which Mr. Marshall wrote in a slum dwelling in Poplar, paints a vivid picture of slum life today. Perhaps the most interesting feature of this section is his contradiction of the usual question: "What's the use of giving these slum dwellers new houses. You see, they'll only make slums of them in a few months, with their dirty habits." Even if this were true, he states, it would be a miserable, unsympathetic attitude of mind. But it is not true; it is, indeed, a poisonous lie which is often repeated to drug the uneasy conscience. He estimates that 95 per cent. of slum dwellers, when re-housed, would form fresh habits and take the greatest pride in their new homes, and gives a number of instances of the slum-dwellers' attitude to change.

> "It was on a council estate in Gateshead that a grandmother explained that she'd moved there when her street in the city had been demolished. 'And at first I cried,' she said. 'You see, I was born there, and I couldn't bear to leave. I thought I'd been lonely—but now, why, I'd live on crusts to pay the rent of this house. It's airy, mister, and clean, and I'm happy here.' I remember another old lady, in Stepney this time, who had just moved into a bright roomy flat, and I can hear her high, eager voice, quavering with joy as she told me how wonderful it all was, and then she added, 'Dad used to go to the boozer every night, but now he justs sits in his chair, reading the paper, as happy as the Duke of Wellington.'"

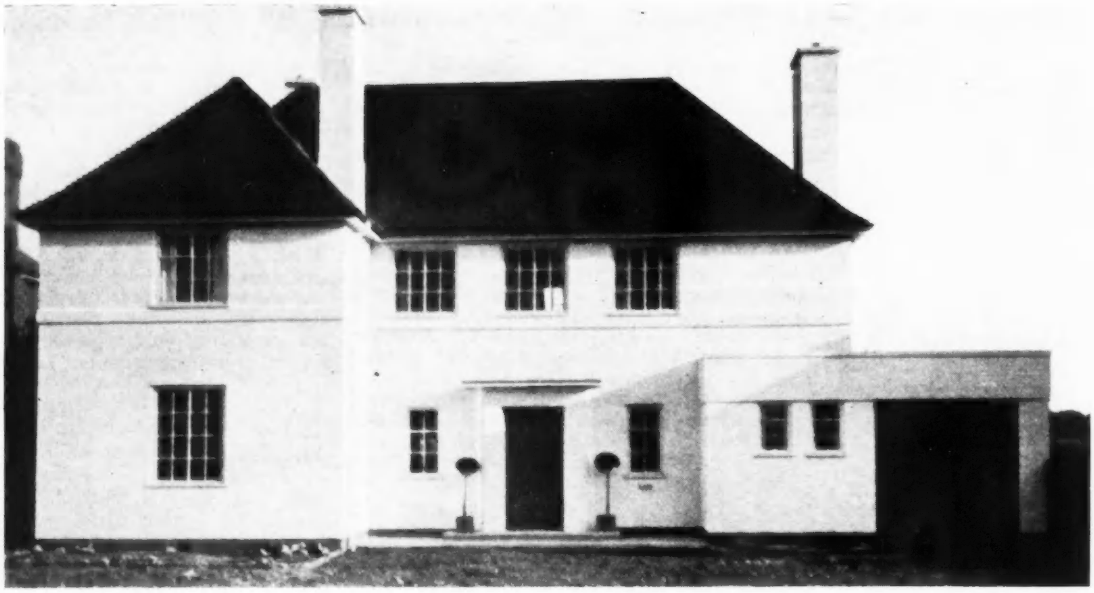
Slum is a challenging book, and is published at the small price of 3s. 6d. It should be read by all who are *still interested* in the question of housing reform.

Publications Received

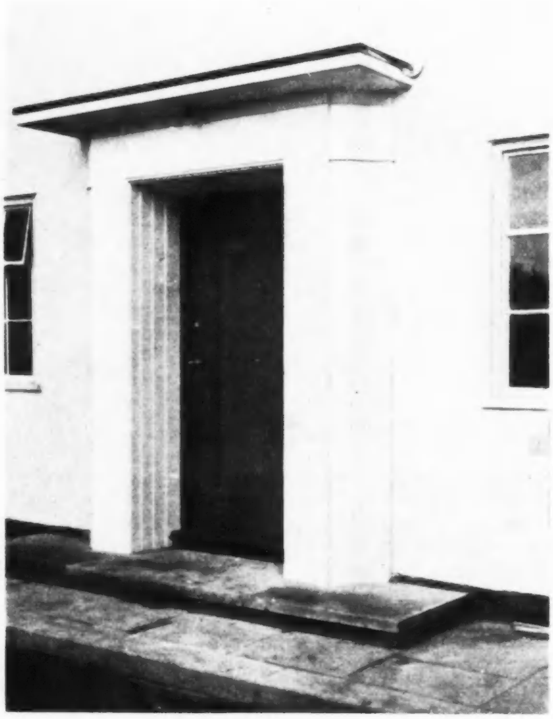
Modern Shopfront Construction. By TREVOR PERRY. London: Technical Press. Price 5s. net.

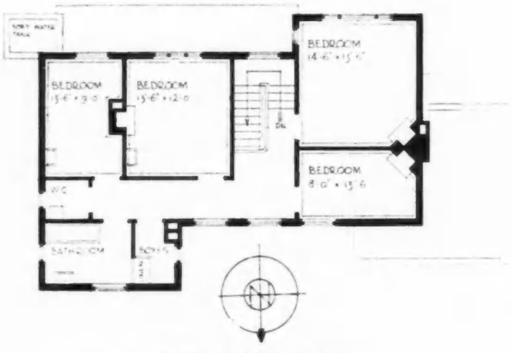
Country Houses of Kent. By A. OSWALD. London: Country Life. Price 12s. 6d. net.

HOUSE AT TETTENHALL, STAFFS.

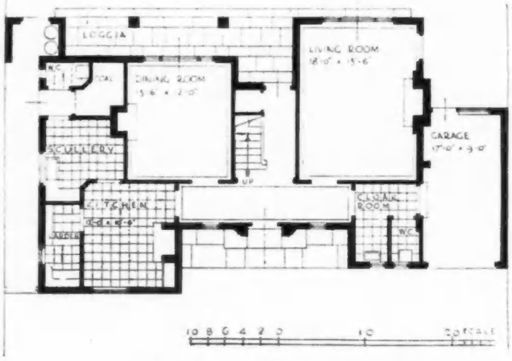


The house is in 9-in. brickwork, rendered in Portland cement and colour-washed ivory. The roof is of brown hand-made tiles. The flat roof over the garage is of joists and boards with bituminous felt covering, and that over the loggia of reinforced concrete rendered in waterproof cement. Above: the house from the north. Below: a detail of the front door.




SOFT WATER TANK
BEDROOM 13-6" × 9-0"
BEDROOM 13-6" × 12-0"
DN
BEDROOM 14-6" × 13-6"
BEDROOM 8-0" × 13-6
W.C.
BATHROOM
BOXES
N

FIRST FLOOR PLAN


LOGGIA
W.C.
COAL
DINING ROOM 13-6" × 12-0"
LIVING ROOM 18-0" × 13-6"
GARAGE 17-0" × 9-0"
SCULLERY
UP
KITCHEN 12-0 × 12-6
CLOAK ROOM
W.C.
LARDER
10 8 6 4 2 0 10 20 SCALE

GROUND FLOOR PLAN

DESIGNED BY
LAVENDER AND TWENTYMAN

SOCIETIES AND INSTITUTIONS

DEVON AND CORNWALL ARCHITECTURAL SOCIETY

Following are some extracts from a paper on "Kitchens," read by Mr. Stanley Benham at a recent meeting of the Devon and Cornwall Architectural Society, held at Plymouth :

What are the principal alterations which have taken place in the last 50 years? I would suggest the following eleven points :—

1 : The complete abandonment of the open coal fire roasting range. At the Reform Club when I went over the kitchen in 1922, I found a roasting fire 6 ft. wide doing nothing but one leg of mutton, so this illustrates what an extremely extravagant form of cooking it was.

2 : Following on this the almost universal abandonment of coal cooking apparatus at all, except in remote country places where gas is not available and electricity is too expensive, and in a few hotels where French chefs are employed.

3 : The introduction of the central and wall type solid-top gas range. This range, which was first made in America, has to a large extent revolutionized cooking apparatus in hotel and restaurant kitchens, being almost universally adopted. The ovens are externally heated and the top is mainly fitted with solid metal as in a coal range. The advantages of the solid-top range are that you can get all the points in favour of a coal range without the dirt, dust and inconvenience attached to coal. The top is smooth, so that the cook can easily shift the pots and pans to the exact degree of heat required. The range is mounted on legs so that it is easy to clean underneath as well as behind. Frequently one or two sections are fitted with open burners.

4 : The much more scientific and economical use of gas for cooking generally. There is no doubt that this has made an enormous advance in my time. In my young days gas cooking apparatus by all makers was a rather rudimentary affair. Now everything is worked out to give the greatest efficiency, the mixture of air is easily regulated, and burners are all removable by hand, and the fittings are easily cleaned inside and out. A gas-heated steamer was, I think, then unheard of, but now it is a most popular fitting. Most fittings can now be had with thermostatic control, giving a considerable reduction in the consumption of gas.

5 : The introduction of electric cooking apparatus for roasting, grilling and hot closets. This is only possible where current can be obtained at a reasonable price, and under very few circumstances should I recommend electricity being used for any other apparatus than those three named, as it is difficult to get reasonable economy for boiling, steaming or stewing.

6 : Enamelling of cooking apparatus. I should say that Germany is mainly the country of origin so far as this is concerned, but great advances have been made by us in the last few years in this line. It certainly looks much nicer and is more easily kept clean.

7 : The use of stainless steel for casings for apparatus, hot closet tops, sinks, draining boards, tables, service counters, etc. The great advantage of this is that although costly it is easily kept clean, is more hygienic and is practically everlasting.

8 : Vastly improved arrangements for the service of food by having much larger service rooms or cafeterias. The introduction of cafeterias in this country dates back only the last five years or so, and it certainly is a very convenient method of service, especially for staff and works canteens.

9 : The tiling of floors and walls, making for much greater cleanliness.

10 : The introduction of dishwashing machines, potato peeling, meat slicing and tea measuring machines and other labour-saving devices.

11 : The mechanical ventilation of kitchens making for much greater comfort and health for the kitchen staff. There is no reason why the kitchen should not be a perfectly comfortable place to live in now, and there is every reason why we should get rid of the terribly hot and unventilated dungeons that some kitchens still are. Windows are not a suitable form of ventilation for large kitchens as cooks and chefs are very sensitive to cold.

The position of the kitchen should be as near the dining room as possible ; on the same level if it can be arranged, but otherwise immediately above or below. Nothing can be laid down as to the size of the kitchen, scullery, etc., as each case must be judged on its own merits. It is as bad a fault for a kitchen to be too large as too small, but it is much more unusual. Although I do not advocate a kitchen being small and cramped, it is wonderful what can be done in a small space by proper planning and organization.

The main entrance and clock tower of the Barnsley Municipal Buildings, which were officially opened by the Prince of Wales last week. The architects are Briggs and Thornely.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

Mr. B. R. Gribbon, F.R.I.B.A., presided at a meeting of the West Yorkshire Society of Architects, held at Leeds on December 7, when a lecture was given by Mr. E. R. Jarratt, F.R.I.B.A.

Architecture, he said, developed and evolved slowly or rapidly, according to the mentality of the people who practised it. There were no short cuts and no retrogression, but always progress. There was tradition but no imitation nor sentimental clinging to past styles. A spirit of growth, movement and adventure pervaded the architects of the past. All great buildings were stamped with the personality of their designers and expressed the spirit of their age.

The modern architect had complex problems to solve, but architecture could not stand still. Provided their buildings were appropriate to their purpose, only good architecture could result.

THE CHARTERED SURVEYORS' INSTITUTION

The annual dinner of the Quantity Surveyor members of the Chartered Surveyors' Institution was held at the Hotel Victoria, Northumberland Avenue, W.C., on December 13. Mr. Horace W. Langdon (President) occupied the chair.

Mr. Richard Coppock, responding to the toast of "Our Guests" (proposed by Mr. E. C. Harris), referred to the valuable work now being done by the Building Industries National Council. There was a feeling, he said, that the building industry must advertise itself. They had suffered from the lack of high-powered salesmen. He visualized the time when we should have a Minister of Public Works and Development to supervize the re-building of Britain.

Other speakers included the Rt. Hon. Lord Remnant, Mr. Horace Langdon, and Mr. Stuart Bevan, K.C., M.P.

MANCHESTER SOCIETY OF ARCHITECTS

A paper entitled "Housing, with Special Reference to Slum Clearance," was read by Mr. L. H. Keay, F.R.I.B.A., the Liverpool Housing Director, at a meeting of the Manchester Society of Architects, held last week.

Mr. Keay said the advance of electricity would free town areas from soot and grime, and it might, perhaps, be possible to plan on Continental lines and include sites for rose gardens in the design of blocks of flats.

In cities it was desirable to build five-storey flats. More storeys meant the provision of lifts and higher building costs, but it was essential to plan to the highest densities possible consistent with the provision of ample open spaces. In the case of a block of flats five floors in height at a density of sixty-five to the acre, the same amount of open space was available as with three-storey flats at a density of only forty to the acre. With land at £3,000 an acre there was also a saving of £21 per flat and proportionately lower development charges. No serious objection was raised by tenants occupying a fifth-floor flat, especially if a slightly lower rental was charged. After all, many people would prefer to climb 36 ft. than to walk 5,000 on the level, and then have to pay transport charges.

MAIDSTONE ART AND CRAFT SOCIETY

Mr. S. H. Loweth, F.R.I.B.A., presided at a meeting of the above Society, held on December 6, when a lecture was given by Mr. Alan Durst, the sculptor.

R.A. GOLD MEDAL AWARD

Mr. A. S. Gray, of the L.C.C. Central School of Arts and Crafts, has been awarded the Royal Academy Medal in Architecture.

WELSH SCHOOL OF ARCHITECTURE

The annual prize distribution and exhibition of designs of the South Wales Institute of Architects (Centre Branch) and Welsh School of Architecture, was held at the Technical College, Cardiff, on December 7. Mr. J. Williamson, A.R.I.B.A., presided.

Following the address by the Principal (Mr. W. S. Purchon, A.R.I.B.A.), the Lord Mayor of Cardiff presented the prizes to the students:

Lord Mayor's prize for Third Year students (£2 2s.), (presented by Alderman C. F. Sanders, J.P., Ex-Lord Mayor): J. L. Milburn.

President's prize for First Year students (£3 3s.), (presented by Lieut.-Col. E. H. Fawckner, F.R.I.B.A.): D. T. Jenkins.

First prize for Second Year Work (presented by the Head of the School): L. W. D. Wall.

Architectural Sketching prize (£2 2s.), (presented by H. Teather, F.R.I.B.A.): H. E. A. Scard.

Architectural Construction prize (£2 2s., (presented by H. Budgen, F.R.I.B.A.): J. R. S. Shedden.

Batsford prize for Architectural History and Theory of Design (£2 2s.), presented by Batsford, Ltd.): J. R. S. Shedden.

Sketch Design prize (£2 2s.), (presented by E. C. M. Willmott, A.R.I.B.A.): D. W. Roberts.

Essay prize (£2 2s.), (presented by the Architectural Press): D. W. Roberts.

Working Drawings prize (£2 2s.), (presented by Ivor Jones, A.R.I.B.A.): H. J. W. Lewis.

Civic Design prize (£2 2s.), (presented by T. Alwyn Lloyd, F.R.I.B.A.): H. J. W. Lewis.

Draughtsmanship prize (£2 2s.), (presented by Percy Thomas, F.R.I.B.A.): H. J. W. Lewis.

Certificate in Architecture (carrying with it exemption from the R.I.B.A. Intermediate Examination): J. L. Milburn (with Distinction); J. P. Hall; J. R. S. Shedden; and Miss A. M. Wride.

Diploma in Architecture (carrying with it exemption from the R.I.B.A. Final Examination and acting as a full qualification for Registration under the Architects' Registration Act of 1931): Miss M. M. Baird (with Distinction in Thesis); S. G. Roberts (with Distinction in Design); F. G. Allen (with Distinction in Thesis and Construction) and H. J. W. Lewis (with Distinction in Thesis, Construction and Design).

The South Wales Institute of Architects, Central (Cardiff) Branch prizes: Design, Second Year (£2 2s.): H. E. A. Scard; Design, Third Year (£2 2s.): J. L. Milburn and W. G. Sweet; Design, Fourth Year (£3 3s.): A. S. Thomas; Design, Fifth Year (£5 5s.): H. J. W. Lewis; Measured Drawings: 1st prize (£4 4s.): Miss A. M. Wride; Measured Drawings: 2nd prize (£1 1s.): I. J. Lewis and (£1 1s) J. L. Milburn.

SCHOOL PRINCIPALS

• 5 •

G. D. GORDON HAKE

ROYAL WEST OF ENGLAND ACADEMY SCHOOL OF ARCHITECTURE

BORN in 1877, Mr. G. D. Gordon Hake, F.R.I.B.A., was educated at Christ's Hospital and Geneva. He received his architectural training at the Architectural Association, London, and was articled to Col. Sir Robert Edis, C.B.E. Later, he served in the offices of the Surveyor to the Metropolitan Police, Messrs. Collcutt and Hamp, Messrs. Caröe and Passmore and Sir Herbert Baker, R.A.,

After the war (he served in the 1st Wiltshire Regiment) Mr. Hake joined the staff of the Architectural Association, London, and in 1922 he became first resident Headmaster of the Royal West of England Academy School of Architecture, which had up to that time been run by visiting masters from the A.A. He was awarded the R.I.B.A. Athens Bursary in 1930.

His appointments include the following: Vice-chairman, R.I.B.A. Board of Architectural Education; Chairman of the R.I.B.A. Prizes and Scholarships Committee; and member of the Councils of the Royal West of England Academy, R.I.B.A. Schools Committee, Wessex Society of Architects, Bristol Society of Architects, etc. Mr. Hake is joint author (with Mr. E. H. Bulton, A.R.I.B.A.) of *Architectural Drawing.*

LAW REPORTS

CONSTRUCTION OF FAIR WEAR AND TEAR CLAUSE

Cook v. Coats Machine Tool Co., Ltd.—Official Referee's Court. Before Mr. C. M. Pitman, K.C.

THIS was an action by Mrs. E. A. M. Cook, against the defendants, Coats Machine Tool Co., Ltd., of Buckingham Palace Road, to recover damages for alleged breach of a covenant to repair premises at 14 Palmer Street, Westminster.

Mr. Rewcastle, for the plaintiff, stated that the defendants held the property under a lease which expired in 1932, paying a rental of £500 a year. Under the lease, the defendants had to keep the interior in as good repair as it was at the beginning of the tenancy, fair wear and tear excepted. At the commencement of the lease there was a survey, and the premises were then out of repair. After defendants left the premises they were again surveyed and his evidence would be that they were then found to be in an appalling condition. Defendants had done nothing by way of repairs, and they now admitted liability to the extent of £73 odd for repairs.

Mr. Percy J. Westwood and Mr. James Low, a surveyor, gave evidence for the plaintiff, the former saying that bearing in mind the condition of the premises at the commencement of the lease and fair wear and tear, he would deduct 33⅓ per cent. for the repairs now demanded.

Mr. A. Cairns said his case was a denial of breach of covenant alleged, and that the premises were in no worse condition now than at the beginning of the lease in 1925, bearing in mind the clause for fair wear and tear. He admitted for repairs to the value of £73 odd.

Mr. Sydney W. Parker, architect and surveyor, of Ludgate Hill, gave evidence in support of defendants' contention.

The Official Referee, in the course of his judgment, said there was no doubt that when the lease of the premises terminated in 1932, they were in a dilapidated condition. Here the plaintiff had had a schedule of dilapidations prepared amounting to £808, believing that she had a full repairing covenant. But, as matters stood, that covenant was subject to a fair wear and tear clause. He accepted the evidence of Mr. Parker and came to the conclusion that only in some slight respects had the premises been allowed to deteriorate beyond fair wear and tear. His judgment would be for the plaintiff for £75 5s. 8d., plaintiff to have only one-third of her costs in consequence of her exaggerated claim, extending the hearing to three days.

DISPUTE OVER A WALL

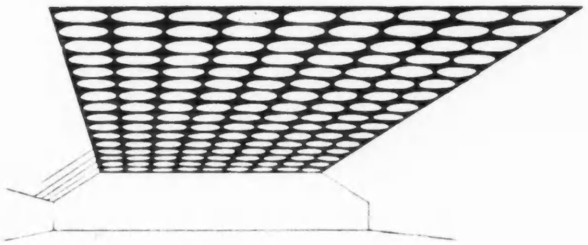
Knight v. *Norwood Autos, Ltd., and Killick.—Chancery Division. Before Mr. Justice Maugham.*

IN this action, Mrs. Charlotte Knight, of Beulah Hill, Norwood, sought a declaration against Norwood Autos, Ltd., garage proprietors, also of Beulah Hill, and Mr. N. E. Killick, managing director of the company, that defendants had wrongfully pulled down her fence and erected a wall on her land. She also sought an order calling upon the defendants to remove the wall and reinstate the fence, and also damages for trespass she alleged the defendants had committed.

The parties are adjoining property owners and plaintiff alleged that the defendants had pulled down her fence and erected a wall which encroached some 4½ inches on her land over a length of some 45 feet.

Mr. Cresswell, K.C., for the defendants, said his case was that the fence in question was on their land and therefore they had committed no trespass in what they had done. Counsel said if his lordship should decide in the plaintiff's favour, he was willing to undertake that the wall should be treated as a party wall.

His lordship, after hearing the evidence of surveyors, called in both sides, found in favour of the plaintiff, with costs of the action. His lordship said the property was conveyed to the plaintiff in 1924, and there appeared to be nothing to indicate the boundary between these two properties, otherwise than by reference to the plan. Having heard the evidence, he came to the conclusion that there had been a trifling encroachment by the defendants upon the plaintiff's land. He did not, however, propose to make a mandatory order for the pulling down of the wall. In the event of a satisfactory undertaking being given by the defendants to treat the wall as a party wall, as counsel had suggested, the consent of the mortgagees having been obtained, he would grant plaintiff 40s. nominal damages. Failing such an arrangement there would be an inquiry as to damages.



TRADE NOTES

[*BY F. R. S. YORKE, A.R.I.B.A.*]

Acoustics

ALVAR AALTO, experimenting in problems of acoustics, has evolved a system that appears to solve the problem of building a hall with such acoustic properties that sound is distributed equally to every part of it, no matter where the speaker stands.

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He designs the roof as a series of almost contiguous small concrete cupolas, from which sound waves are reflected in such a way that the degree of audibility is constant throughout the hall. It is apparent from the section at the foot of this page that the cupolas situated immediately above the speaker's head reflect sound waves over a wide area, whereas those more distant from the source of sound produce a greater concentration of sound volume, reflecting waves almost vertically downwards towards the floor.

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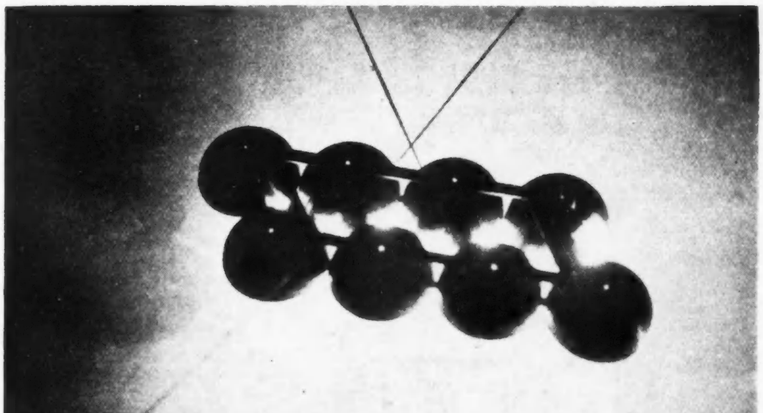
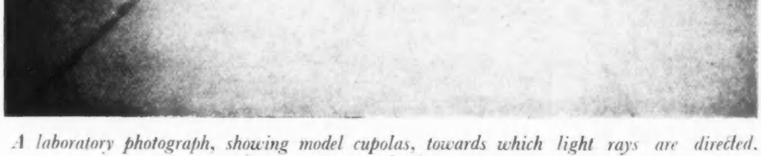
The accompanying photograph—taken during a laboratory experiment in which, for demonstration purposes, light was used instead of sound—shows a group of cupolas lying some 30 metres distant from the speaker's point of delivery. The "floor" below the cupolas is coloured white. It



A laboratory photograph, showing model cupolas, towards which light rays are directed, representing sound waves for demonstration purposes.



Diagrammatic section indicating distribution of sound waves deflected from ceiling cupolas, at varying distances from the source of sound.

appears the roof construction reflects the sound waves downwards, the light being thrown almost directly on the floor. This photograph represents approximately Experiment xx in the sectional diagram.

Escalators

The British Electrical and Allied Manufacturers' Association (B.E.A.M.A.), has just published a book, whose purpose is to record the part played by members of the Association in providing machinery and equipment that enables London's Underground Railways to run fifteen million seat-miles daily.

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In the chapter dealing with escalators I read that when the first moving staircase was installed at Earl's Court Station in 1911 there were 240 lifts in use on the system. But the advantages of the escalator were immediately apparent; it could handle traffic quickly, efficiently and safely, and so it became a feature of all new and reconstructed stations. It is significant that wherever escalators have been installed there has been a notable increase in traffic.

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The earlier types were slow moving and were not easily reversed to cope with traffic peaks, but these were soon succeeded by the "comb" type developed by Waygood-Otis. This machine runs at 180 ft. per minute, compared with 100 ft. per minute of the earlier type. There are two driving chains carrying the axles on which steps are mounted. The steps are secured to the chains by means of escalator shafts, which pass through hollow pins placed at 16 ins. centres along the chain. A full chain when coupled together measures as much as 400 ft., at the deeper stations. The material for the links is cold drawn and afterwards heat-treated to remove any strain set up during the drawing operation. Each batch of bar is tested, brinelled and approved by the resident railway inspector, after which it is cut up into individual link lengths. To prevent distortion in hardening after casing, care is taken that the components have a good finish before casing, and they are inspected prior to case-hardening. After hardening, the components are sand-blasted, a portion tested for hardness to verify correct hardening, and then ground.

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The chain mechanism is driven through a worm and chain drive by an electric motor of 100 or 150 h.p., according to the rise of the escalator. The motors are self-ventilated, compound wound and fitted with interpoles. Each machine has been arranged with special insulation to withstand arduous conditions, and as the machines are often placed in confined spaces, reliability and minimum attention are essential conditions.

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The motors are controlled through automatic starters, with starting panels of the floored fixing pillar type. The escalator is fitted with two electromagnetic brakes which, as they have to be powerful enough to comply with the worst conditions, might be too severe in other circumstances. A relay has therefore been fitted in the control panels whereby the degree of braking is controlled by the load on the machine.

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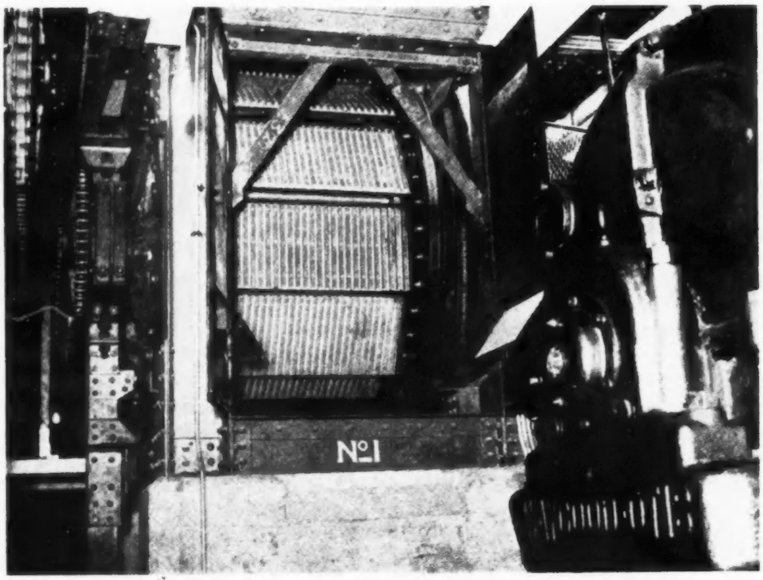
Speed variation is provided, the up and down speeds being independently adjustable. Provision is made for the automatic changing of the speed governor setting when the escalator speed is changed from slow to fast or vice versa.



Treads at turning point at the bottom of escalator, Wood Green Station.

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Each panel comprises a contactor type automatic reversing starter arranged for local and remote control by means of "up," "down," and "stop" push buttons. Inching is arranged, an armature diverter resistance being provided in order to obtain a slow speed. An interesting feature of these panels is the use of a rectifier for the field discharge in place of the more usual resistances.

Furniture for Workmen's Dwellings, Moscow

I hear that discussions are proceeding between the housing administration of the Moscow Soviet and the Moscow Furniture Trust concerning the provision of suitable furniture for the workers' dwellings at present being erected.

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It is proposed that experiments be made by furnishing two or three flats throughout, not by purchasing cupboards and tables from a furniture store, but by designing new types of furniture which should have regard to the comfort of the tenants, the look of the rooms and the architectural style of the house.

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A number of bodies are working on the design of new furniture, and the idea is to co-ordinate them and bring them in closer contact with one another and with the Furniture Trust and the factories actually making the furniture. A group of designers in the Department of Personal Hygiene of the Institute of Communal Sanitation and Hygiene, attached to the Commissariat of Health is working on the question of a rational arrangement of furniture in rooms.

THE BUILDINGS ILLUSTRATED

Sub-Contractors' List

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :—

Cocktail Bar on Flying Scotsman, L.N.E.R. (pages 795–799). Sub-contractors : Troughton and Young, lighting fittings : Eric Munday, Ltd., Staybrite steelwork, sign over door, stools and table ; Korkoid Decorative Flooring Co., flooring. Rexine in green and silver for the walls and front bar. Buffet Cars : Sub-contractors : Troughton and Young, lighting fittings ; Pugh Bros., Wiretex glass to doors : Eric Munday, Ltd., Staybrite steel rails, etc., to counter ; Korkoid Decorative Flooring Co., flooring and table top ; Rexine, dado, walls above and ceilings and doors ; Pugh Bros. Wiretex glass for doors.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

BALHAM. *Hospital Extensions.* The L.C.C. is further to enlarge the St. James's Hospital at a cost of £26,260.

BARKING. *Lay-out and Swimming Bath.* The Corporation has approved plans for the lay-out of the western section of the Becontree open belt at a cost of £20,670, and is considering the lay-out of the southern section which is estimated to cost £12,000. The Corporation has acquired land at Becontree from the L.C.C for the construction of an open-air swimming bath.

BECONTREE. *Shops and Houses.* Mr. J. G. Tilley is to erect 25 shops in Green Lane, and 17 houses in Mayfield Road.

CARSHALTON. *Schools.* The Surrey Education Committee has approved revised plans for the erection of two elementary schools on the St. Helier estate, at a cost of £68,500.

CHERTSEY. *Mental Colony.* The Surrey C.C. is to prepare a scheme for the provision of accommodation at the Botleys Park colony, Chertsey, for 1,200 mental defectives, and the necessary staff quarters.

ENFIELD. *Houses and Shops.* Plans passed by the U.D.C. : Four houses, Green Street, for Mr. E. W. Palmer ; four houses, Oatlands Gardens, for the Oatlands Estate, Ltd. ; six houses, Slades Hill, for Mr. R. L. Plowman ; two houses, off Lavender Hill, for Mr. A. Wyman ; 13 shops, Hertford Road, Freezywater, for Messrs. W. Goodchild & Co.

EPSOM. *Schools.* The Surrey Education Committee is to erect a central school at a cost of £24,610, and a junior school at a cost of £11,500.

HITHER GREEN. *Hospital Extension.* The L.C.C. is to erect an isolation block and extend the staff accommodation at the Park Hospital, at a cost of £33,400.

ILFORD. *Hospital Extensions.* The governors of King George Hospital are to undertake extensions, at a cost of £60,000.

ISLINGTON. *Tenements.* The L.C.C. is to construct five-storey blocks of tenements at Andober Road, at a cost of £51,000.

KENNINGTON. *Tenements.* The L.C.C. is to erect four blocks of tenements on the Oval site at a cost of £84,000.

KINGSBURY. *Arterial Road.* On behalf of All Souls College : Messrs. Done, Hunter & Co. are to construct, at a cost of £28,770, an arterial road from Salmon Street to Kenton Road, Kingsbury, Middlesex.

LAMBETH. *Nurses' Home, etc.* The L.C.C. is to erect a nurses' home and training centre at the Lambeth Hospital, at a cost of £52,560.

LEWISHAM. *School.* The L.C.C. Education Committee is to erect an elementary school at the Honor Oak estate, at a cost of £28,500.

SHOREDITCH. *Dwellings.* The L.C.C. is to erect dwellings on the Haggerston Road site, at a cost of £22,600. The B.C. is to begin a scheme for the reconstruction of old houses on the Stone bridge estate, at a cost of £12,590. The complete reconstruction will involve an expenditure of £176,000.

SOUTHWARK. *Tenements.* The B.C. proposes an arrangement whereby Church Army Housing, Ltd., will erect 46 tenements on the Bear Lane and the Syvliffe areas.

STEPNEY. *Slum Clearance and Tenements.* The L.C.C. is to clear the Waley Street area, at a cost of £12,000. It is suggested that reconstruction shall be arranged in association with a public utility society. The B.C. is to erect tenements on Old Gravel Lane at a cost of £5,930.

SOUTHALL-NORWOOD. *Houses and Shops.* Plans passed by the U.D.C. : 41 houses, Selby Gardens, etc., for Messrs. G. Wimpey & Co., Ltd. ; 47 houses, Scotts Road, for General Housing Co. ; eight shops, South Road, for Messrs. Best and Beach.

SOUTHERN COUNTIES

BRIGHTON. *Houses.* The Corporation has prepared a scheme for the erection of small houses at a cost of £250 each on the Bristol estate. Thirty-one will be provided and let at 2s. 6d. a week to aged people.

BRIGHTON. *Premises.* The Corporation has leased a site in North Street, to Messrs. Braybons, Ltd., who are to erect premises to cost at least £20,000. The Corporation is arranging with Lloyds Bank, Ltd., for the erection of new premises in London Road, at a cost of £15,000.

BRIGHTON. *Houses and Shops.* The Corporation has approved the lay-out of the Manor Farm estate providing for the erection of 403 houses, four shops and 31 small type houses. Roads and sewers will cost £17,000.

EASTBOURNE. *Houses, Shops and Flats.* Plans passed by the Corporation : Two houses, Hunlock Avenue, for Mr. F. C. Benz ; shop and flat, 24, Cornfield Terrace, for Messrs. P. D. Stonham and Son ; two houses, South Lynn Drive, for Messrs. W. J. Martin & Co. ; four houses, Astaire Avenue, for Mr. F. C. Benz ; two houses, Milton Crescent, for Messrs. W. Llewellyn and Sons, Ltd. ; eight flats, Burlington Place, for the Pearl Assurance Co., Ltd. ; four houses, Queen's Road, for Messrs. J. Thurlow and Sons.

FARNHAM. *Houses and Street.* Plans passed by the U.D.C. : Four houses, Weybourne Lane, etc., for Mr. R. W. Hards ; two houses, Middle Bourne, Snailslynch estate, for Mr. A. J. Lehman ; two houses, Chestnut Avenue, for Mr. S. Marshall ; estate lay-out, Wrecclesham Hill, for Messrs. Monk and Cox ; new street, Brookley Park estate, for Brookley Park Estates.

HASTINGS. *Houses.* Plans passed by the Corporation : Two houses, Hoads Wood Road, for Messrs. Oxley and Burleigh ; four houses, Hughenden Road, for Mr. R. Hodgson ; 24 houses, Old London Road, for Mr. F. Gordon Watford ; 2 houses, St. Helen's Park Road, for Messrs. Heppell and Sweetman.

PORTSMOUTH. *Houses and Streets.* Plans passed by the Corporation : New streets, off Salisbury Road, Cosham, for Messrs. Bailey and White ; eight houses, Evelegh Road, Farlington, for Mr. C. W. Stigant ; two houses, Stride Avenue, for Mr. E. E. Wilson ; 72 houses, Hawthorn Crescent, for Messrs. G. and W. Mitchell ; new streets, off Hayling Avenue, Baffins, for Messrs. Morey and Flowers ; six houses, Albion Street, for Mr. H. M. Gammans ; two houses, Winstanley Road, for Mr. A. J. Rogers.

SHOREHAM. *Aerodrome.* The Brighton, Worthing and Hove Corporations have completed the purchase of 146 acres at Shoreham for a joint aerodrome, and a scheme for its development has now been prepared at a cost of £39,000.

SOUTH-WESTERN COUNTIES

BRISTOL. *Roads and Sewers.* The Corporation is to construct roads and sewers on the Berry Lane estate at a cost of £20,612, preparatory to the erection of 310 houses either by the Corporation or private enterprise.

TORQUAY. *Houses and Flats.* Plans passed by the Corporation : Four houses, Cedar Court Road, for Messrs. H. Lloyd and Son ; two houses, Burridge Road, Chelston ; lay-out, adjoining Cadewell Lane, Shiphay, for Mr. G. Banbury ; two houses, Cadewell Lane, for Mr. E. Bowden ; two houses, Second Avenue, Daison Heights, for Mrs. E. M. Ellicott ; conversion into three flats, Saville House, Babbacombe Road, for Mr. H. K. Skinner ; two houses, Herbert Road, for Messrs. Midgley and Hardy, Ltd. ; two houses, St. Katherine's Road, for Mr. W. Murch ; two houses, Avoca Avenue, Tor Vale, for Mr. E. Green.

MIDLAND COUNTIES

KIDDERMINSTER. *Houses, Workshops, etc.* Plans passed by the Corporation : Foundry, Clensmore, for Mr. J. J Russell ; works extensions, Coventry Street, fo Messrs. G. T. Cheshire and Sons ; shop, Stourbridge Road, for Mr. R. E. Oakley ; workshop, Crescent Road, for Messrs. Turvey & Co. ; two houses, Goldthorn Road, for Messrs. Lacy Bros., Ltd. ; six houses, Sutton Road, for Mr. A. B. Bent ; three houses, Holman Street, for Miss Austin ; two houses, Comberton estate, for Messrs. Towers, Wilson & Co. ; four houses, Linden Avenue, for Mr. J. T. Biggs ; eight houses, Greatfield Road, for Mr. J. Whittingslow ; two houses, Birmingham Road, for Messrs. Wallace & Co. The Corporation is to erect a further 40 houses on the Broadwaters estate.

SUTTON COLDFIELD. *Houses.* Plans passed by the Corporation : 200 houses, new roads off Boldmere Road (amended plan), for Messrs. T. P. Smith, Ltd. ; 18 houses, Bakers Lane, for Mr. T. A. Glynn ; 10 houses, Bakers Lane, for Mrs. S. A. Bartley ; 10 houses, Clarence Road, for Mr. F. G. Harris ; two houses, Chester Road, for Mr. J. Humphries ; two houses, Crown Lane, for Messrs. T. Morgan and Son ; two houses, Maxstoke Road, for Messrs. Yates and Griffin ; 20 houses, off Orphanage Road, for Messrs. F. C. Price, Ltd. ; four houses, Tamworth Road, for Alton Estates ; 16 houses (amended plan), Walmley Road, for Mr. R. H. Bridge ; two houses, Whitehouse Common Road, for Messrs. Clavis, Ltd. ; five houses, Welford Road, for Mr. T. Glynn.

WOLVERHAMPTON. *Houses and Shops.* Plans passed by the Corporation : Three houses, Penn Court estate, for Mr. E. H. Appleton ; two houses, Oxley Moor Road, for Mr. A. Mason ; three houses, Jones Avenue, for Mr. Thos. Jones ; eight houses, Windsor Avenue, for Messrs. E. Leach & Co. ; 14 houses, Pinfold Lane, for Mr. F. D. Marston ; 36 houses, Fallings Park estate, for Mr. M. A. Boswell ; 10 houses, Warstones Road, for Mr. C. B. Jones ; four houses, Plascom Road, for Mr. J. V. Senior ; 14 houses, Pinfold Lane, for Messrs. Biddulph and Thrift ; two houses, Finchfield estate, for Mr. J. R. Woodisse ; two shops, New Penn estate, for Messrs. A. M. Griffiths and Son, Ltd. ; two houses, Burnham Avenue, for Mr. A. W. Edwards ; lay-out of New Oxley building estate, Stafford Road, for Mr. F. W. Jones.

NORTHERN COUNTIES

RAWTENSTALL. *Houses.* The Corporation is to obtain sites for the erection of 120 houses for tenants to be displaced from slums.

SHEFFIELD. *Houses.* Plans passed by the Corporation : Seventeen houses, Hampton Road, for Mr. C. W. Alflat ; four houses, Malton Street, for Mr. J. W. Whiteley ; 358 houses, Shiregreen estate, for Corporation Estates Committee ; two houses, Richmond Road, for Mr. H. Wilson ; two houses, Herries Road, for Mr. E. C. Thompson ; two houses, Herries Road, for Messrs. Franklin and Cooper ; 31 houses, Laird Avenue, for Messrs. W. Marlow and Sons, Ltd. ; four houses, Hurlfield Road, for Messrs. T. Ardern and Son ; eight houses, Wincobank Lane, for Messrs. Barrett and Milner ; two houses, Button Hill, for Messrs. Melling Bros., Ltd. ; five houses, Hastings Road, for Mr. J. W. Bailey ; six houses, Forres Avenue, for Mr. W. A. Wright.

SHEFFIELD. *Slum Clearance.* The Corporation is to proceed with clearances at six slum areas.

SHEFFIELD. *Lay-out.* The Corporation has approved the provisional lay-out of 344 acres on the Heeley Bank estate for rehousing purposes.

WARRINGTON. *Factory, Houses, etc.* Plans passed by the Corporation : Factory, Norman Street, for Alliance Box Co., Ltd. ; baths and dressing rooms, Fletcher Street, for Warrington Rugby Football Club ; 20 houses, off Hallfields Road, for Messrs. Perdue and Whitfield.

YORK. *Houses.* Plans passed by the Corporation : Six houses, Burton Stone Lane, for Mr. A. Temple ; lay-out of estate and four houses, Heslington Lane, for Messrs. J. Allison and Sons ; house and shop, Saxon Place, for Mr. A. Park ; lay-out of estate, Holgate, for Sir R. Newbald Kay ; two houses, Westwood Terrace, for Mr. E. Relton ; six houses, Grantham Drive, for Mr. J. Foster ; two houses, Swinnerton Avenue, for Messrs. Walter West, Ltd. ; two houses, Kilburn Road, for Messrs. F. Shepherd and Son, Ltd. ; 34 houses, Kilburn Park estate, for Mr. J. Foster ; two houses, Burnholme Drive, for Mr. J. N. Dunn ; lay-out of estate, Huntington Road, for Messrs. Wray and Sons ; two houses, Fulfordgate Road, for Messrs. W. Galtress and Simpson Bros. ; two houses, Top Lane, Copmanthorpe, for Mr. B. Hartland.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen ; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny	S. Wales & M.	1 5	1 0¾
A_3	Abingdon	S. Counties	1 4	1 0
A	Accrington	N.W. Counties	1 5½	1 1¼
A_3	Addlestone	S. Counties	1 4	1 0
A	Adlington	N.W. Counties	1 5½	1 1¼
A	Airdrie	Scotland	•1 5½	1 1¼
C	Aldeburgh	E. Counties	1 1½	10¼
A	Altrincham	N.W. Counties	1 5½	1 1¼
B_3	Appleby	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone	Mid. Counties	1 4	1 0
B_2	Aylesbury	S. Counties	1 2½	11
B_1	BANBURY	S. Counties	1 3	11½
B_1	Bangor	N.W. Counties	1 3	11½
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley	Yorkshire	1 5½	1 1¼
B	Barnstaple	S.W. Counties	1 3½	11¾
A	Barrow	N.W. Counties	1 5½	1 1¼
A	Barry	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke	S.W. Counties	1 3	11½
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley	Yorkshire	1 5½	1 1¼
A_3	Bedford	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley	Mid Counties	1 4½	1 0½
B_3	Bicester	S. Counties	1 2	10½
	Birkenhead	N.W. Counties	•1 7	1 2¼
A	Birmingham	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn	N.W. Counties	1 5½	1 1¼
A	Blackpool	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor	S. Counties	1 2½	11
A	Bolton	N.W. Counties	1 5½	1 1¼
A	Boston	Mid. Counties	1 4	1 0
A	Bournemouth	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford	Yorkshire	1 5½	1 1¼
A_1	Brentwood	E. Counties	1 5	1 0¾
A	Bridgend	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater	S.W. Counties	1 3	11½
A_1	Bridlington	Yorkshire	1 5	1 0¾
A	Brighouse	Yorkshire	1 5½	1 1¼
A_3	Brighton	S. Counties	1 4	1 0
A	Bristol	S.W. Counties	1 5½	1 1¼
B_3	Brixham	S.W. Counties	1 2	10½
A_2	Bromsgrove	Mid. Counties	1 4½	1 0½
C	Bromyard	Mid. Counties	1 1½	10¼
A	Burnley	N.W. Counties	1 5½	1 1¼
A	Burslem	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A_1	Buxton	N.W. Counties	1 5	1 0¾
A_2	CAMBRIDGE	E. Counties	1 4½	1 0½
B_2	Canterbury	S. Counties	1 2½	11
A	Cardiff	S. Wales & M.	1 5½	1 1¼
A	Carlisle	N.W. Counties	1 5½	1 1¼
B	Carmarthen	S. Wales & M.	1 3½	11¾
B	Carnarvon	N.W. Counties	1 3½	11¾
A	Carnforth	N.W. Counties	1 5½	1 1¼
A	Castleford	Yorkshire	1 5½	1 1¼
B	Chatham	S. Counties	1 3½	11¾
B	Chelmsford	E. Counties	1 3½	11¾
A_3	Cheltenham	S.W. Counties	1 4	1 0
A	Chester	N.W. Counties	1 5½	1 1¼
A	Chesterfield	Mid. Counties	1 5½	1 1¼
B_2	Chichester	S Counties	1 2½	11
A	Chorley	N.W. Counties	1 5½	1 1¼
B_2	Cirencester	S. Counties	1 2½	11
A	Clitheroe	N.W. Counties	1 5½	1 1¼
A	Clydebank	Scotland	1 5½	1 1¼
A	Coalville	Mid. Counties	1 5½	1 1¼
A_3	Colchester	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett	N.E. Coast	1 5	1 0¾
A_2	Conway	N.W. Counties	1 4½	1 0½
A	Coventry	Mid. Counties	1 5½	1 1¼
A_2	Crewe	N.W. Counties	1 4½	1 0½
A_3	Cumberland	N.W. Counties	1 4	1 0
A	DARLINGTON	N.E. Coast	1 5½	1 1¼
A	Darwen	N.W. Counties	1 5½	1 1¼
A_2	Deal	S. Counties	1 2½	11
A_3	Denbigh	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury	Yorkshire	1 5½	1 1¼
B	Didcot	S. Counties	1 3½	11¾
A	Doncaster	Yorkshire	1 5½	1 1¼
B_2	Dorchester	S.W. Counties	1 2½	11
A_3	Driffield	Yorkshire	1 4	1 0
A_2	Droitwich	Mid. Counties	1 4½	1 0½
A	Dudley	Mid. Counties	1 5½	1 1¼
A	Dundee	Scotland	1 5½	1 1¼
A	Durham	N.E. Coast	1 5½	1 1¼
A_3	EASTBOURNE	S. Counties	1 4	1 0
A_1	Ebbw Vale	S. Wales & M.	1 5	1 0¾
A	Edinburgh	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter	S.W. Counties	•1 4½	1 0½
B_1	Exmouth	S.W. Counties	1 3	11½
A_3	FELIXSTOWE	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood	N.W. Counties	1 5½	1 1¼
B_2	Folkestone	S. Counties	1 2½	11
A	Frodsham	N.W. Counties	1 5½	1 1¼
B_2	Frome	S.W. Counties	1 2½	11
A	GATESHEAD	N.E. Coast	1 5½	1 1¼
B	Gillingham	S. Counties	1 3½	11¾
A_2	Gloucester	S.W Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport	S. Counties	1 4	1 0
A_3	Grantham	Mid. Counties	1 4	1 0
A_1	Gravesend	S. Counties	1 5	1 0¾
A	Greenock	Scotland	•1 5½	1 1¼
A	Grimsby	Yorkshire	1 5½	1 1¼
B_1	Guildford	S. Counties	1 3	11½
A	HALIFAX	Yorkshire	1 5½	1 1¼
A	Hanley	Mid. Counties	1 5½	1 1¼
A	Harrogate	Yorkshire	1 5½	1 1¼
A	Hartlepools	N.E. Coast	1 5½	1 1¼
B	Harwich	E. Counties	1 3½	11¾
B_2	Hastings	S. Counties	1 2½	11
A_3	Hatfield	S. Counties	1 4	1 0
B	Hereford	S.W. Counties	1 3½	11¾
A_3	Hertford	E. Counties	1 4	1 0
A	Heysham	N.W. Counties	1 5½	1 1¼
A	Howden	N.E. Coast	1 5½	1 1¼
A	Huddersfield	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	ILKLEY	Yorkshire	1 5½	1 1¼
A	Immingham	Mid. Counties	1 5½	1 1¼
A_3	Ipswich	E. Counties	1 4	1 0
B_3	Isle of Wight	S. Counties	1 2	10½
A	JARROW	N.E. Coast	1 5½	1 1¼
A	KEIGHLEY	Yorkshire	1 5½	1 1¼
B	Kendal	N.W. Counties	1 3½	11¾
B	Keswick	N.W. Counties	1 3½	11¾
A	Kettering	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn	E. Counties	1 2½	11
A	LANCASTER	N.W. Counties	1 5½	1 1¼
A_1	Leamington	Mid. Counties	1 5	1 0¾
A	Leeds	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield	Mid. Counties	1 4½	1 0½
A	Lincoln	Mid. Counties	1 5½	1 1¼
	Liverpool	N.W. Counties	•1 7	1 2¼
A_2	Llandudno	N.W. Counties	1 4½	1 0½
A	Llanelly	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham	N.W. Counties	1 5½	1 1¼
A_1	MACCLESFIELD	N.W Counties	1 5	1 0¾
B	Maidstone	S. Counties	1 3½	11¾
A_3	Malvern	Mid. Counties	1 4	1 0
A	Manchester	N.W. Counties	1 5½	1 1¼
A	Mansfield	Mid. Counties	1 5½	1 1¼
B_1	Margate	S. Counties	1 3	11½
A_3	Matlock	Mid. Counties	1 4	1 0
A_1	Merthyr	S. Wales & M.	1	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich	N.W. Counties	1 4½	1 0½
B_2	Minehead	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe	N.W. Counties	1 5½	1 1¼
A_2	NANTWICH	N.W. Counties	1 4½	1 0½
A	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson	N.W. Counties	1 5½	1 1¼
A	Newcastle	N.E. Coast	1 5½	1 1¼
A	Newport	S. Wales & M.	1 5½	1 1¼
A	Normanton	Yorkshire	1 5½	1 1¼
A_1	Northampton	Mid. Counties	1 5	1 0¾
A	North Staffs.	Mid. Counties	1 5½	1 1¼
A	North Shields	N.E. Coast	1 5½	1 1¼
A_2	Norwich	E. Counties	1 4½	1 0½
A	Nottingham	Mid. Counties	1 5½	1 1¼
A	Nuneaton	Mid. Counties	1 5½	1 1¼
A_3	OAKHAM	Mid. Counties	1 4	1 0
A	Oldham	N.W. Counties	1 5½	1 1¼
A_3	Oswestry	N.W. Counties	1 4	1 0
A_2	Oxford	S. Counties	1 4½	1 0½
A	PAISLEY	Scotland	•1 5½	1 1¼
B_3	Pembroke	S. Wales & M.	1 2	10½
A	Perth	Scotland	•1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth	S.W. Counties	•1 5½	1 1¼
A	Pontefract	Yorkshire	1 5½	1 1¼
A_1	Pontypridd	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth	S. Counties	1 4	1 0
A	Preston	N.W. Counties	1 5½	1 1¼
A	QUEENSFERRY	N.W. Counties	1 5½	1 1¼
A_2	READING	S. Counties	1 4½	1 0½
B	Reigate	S. Counties	1 3½	11¾
A_3	Retford	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale	N W. Counties	1 5½	1 1¼
B	Rochester	S. Counties	1 3½	11¾
A_1	Ruabon	N.W. Counties	1 5	1 0¾
A	Rugby	Mid. Counties	1 5½	1 1¼
A_3	Rugeley	Mid. Counties	1 4	1 0
A	Runcorn	N.W. Counties	1 5½	1 1¼
A_2	ST. ALBANS	E. Counties	1 4½	1 0½
A	St. Helens	N.W. Counties	1 5½	1 1¼
B_3	Salisbury	S.W. Counties	1 2	10½
A_1	Scarborough	Yorkshire	1 5	1 0¾
A	Scunthorpe	Mid. Counties	1 5½	1 1¼
A	Sheffield	Yorkshire	1 5½	1 1¼
A	Shipley	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury	Mid. Counties	1 4½	1 0½
A_2	Skipton	Yorkshire	1 4½	1 0½
A_3	Slough	S. Counties	1 4	1 0
A_2	Solihull	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport	N.W. Counties	1 5½	1 1¼
A	S. Shields	N.E. Coast	1 5½	1 1¼
A_2	Stafford	Mid. Counties	1 4½	1 0½
A	Stockport	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud	S.W. Counties	1 3½	11¾
A	Sunderland	N.E. Coast	1 5½	1 1¼
A	Swadlincote	Mid. Counties	1 5½	1 1¼
A	Swansea	S. Wales & M.	1 5½	1 1¼
A_3	Swindon	S.W. Counties	1 4	1 0
A_1	TAMWORTH	N.W. Counties	1 5	1 0¾
B	Taunton	S.W. Counties	1 3½	11¾
A	Teesside Dist.	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth	S.W. Coast	1 4	1 0
A	Todmorden	Yorkshire	1 5½	1 1¼
A_1	Torquay	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall	Mid. Counties	15½	1¼
A	Tyne District	N. E. Coast	1 5½	1¼
A	WAKEFIELD	Yorkshire	1 5½	1 1¼
A	Walsall	Mid. Counties	1 5½	1 1¼
A	Warrington	N.W. Counties	1 5½	1 1¼
A_1	Warwick	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby	Yorkshire	1 4½	1 0½
A	Widnes	N.W. Counties	1 5½	1 1¼
A	Wigan	N.W. Counties	1 5½	1 1¼
B_1	Winchester	S. Counties	1 3	11½
A_3	Windsor	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester	Mid. Counties	1 4½	1 0½
A_3	Worksop	Yorkshire	4	1 0
A_1	Wrexham	N.W. Counties	5	1 0¾
A_3	Wycombe	S. Counties	4	1 0
B_1	YARMOUTH	E. Counties	1 3	11½
B_1	Yeovil	S.W. Counties	1 3	11½
A	York	Yorkshire	1 5½	1 1¼

• In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	3
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
White Portland Cement	,,	8	15	0
Thames Ballast	per Y.C.		6	3
¾" Crushed Ballast	,,		6	9
Building Sand	,,		7	3
Washed Sand	,,		8	3
2" Broken Brick	,,		8	0
¾" ,, ,,	,,		10	3
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	8	17	6
,, Wirecuts	,,	7	17	6
,, Brindles	,,	7	0	0
,, Bullnose	,,	9	0	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	7	10	0
Luton Facings	,,	7	10	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	0	0
Headers	,,	20	10	0
Bullnose	,,	27	10	0
Double Stretchers	,,	29	10	0
Double Headers	,,	26	10	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	4½
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	6
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	28	17	6
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		18	6
,, ⅞"	,,	1	1	6
,, 1"	,,	1	2	0
,, 1¼"	,,	1	5	0
,, 1½"	,,	1	10	0
Deal matchings ½"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	3/16"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1½"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ⅜"	,,	8	6
,, ,, ½"	,,	8	3
,, ,, ⅝"	,,	8	0
,, ,, ¾"	,,	7	6
,, ,, ⅞"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		8		10
Shoes	each	2	0	3	0
Anti-splash shoes	,,	4	6	8	0
Boots	,,	3	0	4	0
Bends	,,	2	7	3	9
,, with access door	,,	—		6	3
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	3	9	6	0
Plinth bends, 4½" to 6"	,,	3	9	5	3
Half-round rain-water gutters of			5		
ordinary thickness metal	F.R.		6		6
Stop ends	each		7		6
Angles	,,	1		1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	0	6
,, drawn pipes	,,		17	6
,, soil pipe	,,	1	0	6
,, scrap	,,		11	0
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			8½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	0	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s. d.		s. d.
Sheet glass, 21 oz., squares n/e 2 ft. s.	F.S.			2⅞
,, ,, 26 oz. ,, ,, ,,	,,			3¼
Arctic glass, white	,,			7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,			6½
¼" Hartley's rough rolled	,,			7
¼" ,, wired cast	,,			10
¼" Georgian wired cast	,,			11
¼" Polished plate, n/e 1 ft.	,,	†7½	to	‡1 0
,, ,, 2	,,	†10	,,	‡1 3½
,, ,, 3	,,	†1 4½	,,	‡1 10
,, ,, 4	,,	†1 11	,,	‡2 4
,, ,, 6	,,	†2 3	,,	‡2 7½
,, ,, 8	,,	†2 5	,,	‡3 0½
,, ,, 12	,,	†2 10	,,	‡3 3½
,, ,, 20	,,	†3 3½	,,	‡3 9
,, ,, 45	,,	†3 6½	,,	‡4 0½
,, ,, 65	,,	†3 11½	,,	‡4 4
,, ,, 90	,,	†4 4	,,	‡4 9
,, ,, 100	,,	†4 6	,,	‡4 11
Vita glass, sheet, n/e 1 ft.	,,			1 0
,, ,, ,, ,, 2	,,			1 3
,, ,, ,, over 2	,,			1 9
,, ,, plate, n/e 1 ft.	,,			1 6
,, ,, ,, 2	,,			3 0
,, ,, ,, 5	,,			4 0
,, ,, ,, 7	,,			5 0
,, ,, ,, 15	,,			6 0
,, ,, ,, over 15	,,			7 6
Putty, linseed oil	lb.			3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	2	6	0
,, ordinary	,,	2	0	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		10	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12″ deep and cart away	Y.S.		2	9
„ to reduce levels n/e 5′ 0″ deep and cart away	Y.C.		8	6
„ to form basement n/e 5′ 0″ deep and cart away	„		9	0
„ „ 10′ 0″ deep and cart away	„		9	6
„ „ 15′ 0″ deep and cart away	„		10	0
If in stiff clay . . . add	„		2	6
If in underpinning . . . „	„		4	0
Planking and strutting to sides of excavation	F.S.		1	0
„ „ to pier holes	„			5
„ „ to trenches	„			5
„ „ extra, only if left in	„			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	„	1	6	0
„ „ (4-2-1)	„	1	12	6
„ „ underpinning	„	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4″ s.	4″ d.	6″ s.	6″ d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
„ junctions		3	9	4	6
Gullies and grating	„	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	27	10	0
„ „ in cement	„	28	15	0
„ Stocks in cement	„	35	0	0
„ Blues in cement	„	52	0	0
Extra only for circular on plan	„	2	0	0
„ backing to masonry	„	1	10	0
„ raising on old walls	„	2	0	0
„ underpinning	„	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	„			8½
„ „ „ red brick facings and pointing	„			11
„ „ „ blue brick facings and pointing	„		1	4
„ „ „ glazed brick facings and pointing	„		3	6
Tuck pointing	„			7
Weather pointing in cement	„			3½
Slate dampcourse	„			10
Vertical dampcourse	„		1	1

ASPHALTER

		s.	d.
¾″ Horizontal dampcourse	Y.S.	4	6
¾″ Vertical dampcourse	„	6	9
¾″ paving or flat	„	4	0
1″ paving or flat	„	5	6
1″ × 6″ skirting	F.R.	1	0
Angle fillet	„		2
Rounded angle	„		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	„		13	6
Artificial stone and do.	„		13	0
York stone templates, fixed complete	„		10	6
„ thresholds	„		13	6
„ sills	„	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	3	10	0
Do., 18″ × 9″	„	3	7	0
Do., 24″ × 12″	„	3	17	0
Westmorland slating, laid with diminished courses	„	6	0	0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	„	3	0	0
Do., all as last, but of machine-made tiles.	„	2	16	0
20″ × 10″ medium Old Delabole slating, laid to a 3″ lap (grey)	„	4	6	6
„ „ „ „ „ „ (green)	„	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
„ to stanchions	„			8
„ to staircases	„		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	„		4	6
„ „ roofs	„		6	6
„ „ trusses	„		7	6
„ „ partitions	„		8	6
¾″ deal sawn boarding and fixing to joists	Sqr.	1	14	6
1″ „ „ „ „	„	1	17	6
1¼″ „ „ „ „	„	2	3	0
¾″ × 2″ fir battening for Countess slating	„		9	6
Do. for 4″ gauge tiling	„		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
„ „ „ 2 „	„		2	9
„ „ „ 3 „	„		3	3
Stout herringbone strutting to 9″ joists	F.R.			10½
1″ deal gutter boards and bearers	F.S.		1	2
1¼″ „ „ „ „	„		1	6
2″ deal wrought rounded roll	F.R.			8
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼″ do.	„	2	10	0
1½″ do.	„	2	17	0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1¼″ do.	„		1	9

CARPENTER AND JOINER—*continued*

		s.	d.
1½″ deal moulded sashes of average size	F.S.	1	9½
2″ „ „	„	1	11½
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1½″ heads, 1″ inside and outside linings, ⅜″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	„	3	7
2″ „ „ „	„	3	10
Extra only for moulded horns	Each		6
1½″ deal four-panel square, both sides, door	F.S.	2	0
2″ „ „ „	„	2	8
1½″ „ but moulded both sides	„	2	4
2″ „ „ „	„	3	0
4″ × 3″ deal, rebated and moulded frames	F.R.	1	0
4½″ × 3½″ „ „	„	1	4
1¼″ deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	„	2	6
1½″ deal moulded wall strings	„	2	1
1½″ „ outer strings	„	2	4
Ends of treads and risers housed to string	Each	1	9
3″ × 2″ deal moulded handrail	F.R.	1	3
1″ × 1″ deal balusters and housing each end	Each	2	0
1½″ × 1½″ „ „	„	2	9
3″ × 3″ deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	„	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	„		19	6
Do. stanchions with riveted caps and bases and do.	„		19	0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	„		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	0
Do. in flashings		1	17	6
Do. in covering to turrets, etc.	„	2	3	6
Do. in soakers	„	1	9	6
Labour to welted edge	F.R.			3½
Open copper nailing	„			3½
Close „ „	„			4½

		½″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	„	6½	8	9	11	1	—
Boiler screws and unions	„	3 3	3 9	5 0	8 0	—	—
Lead traps	„	—	—	—	6 3	8 9	—
Screw down bib valves	„	6 9	9 6	11 0	—	—	—
Do. stop cocks	„	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	„	1	6
Do. outlets	„	4	9
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	„	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	„		3	6
Lathing with sawn laths to ceilings	„		1	4
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	„		1	8
Do. vertical	„		2	1
Rough render on walls	„		1	3
Render, float and set in lime and hair	„		1	11
Render and set in Sirapite	„		2	1
Render, backing in cement and sand, and set in Keene's cement	„		2	10
Extra, only if on lathing	„			4
Keene's cement, angle and arris	F.R.			6
Arris	„			2
Rounded angle, small	„			3
Plain cornices in plaster, including dubbing out, per 1″ girth	„			1½
1″ granolithic pavings	Y.S.		3	6
1½″ „	„		4	6
6″ × 6″ white glazed wall tiling and fixing on prepared screed	„		17	6
9″ × 3″ „ „ „ „	„	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	„		8½
Arctic glass and glazing with putty	„	1	1
Cathedral glass and do.	„	1	2
Glazing only, British polished plate	„		7
Extra, only if in beads	„		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	„		9
Do. with washable distemper	„	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	„	3	3
Do. on woodwork	„	3	6
Do. on steelwork	„	3	0
Do. and brush grain and twice varnish	„	5	6
Stain and twice varnish woodwork	„	1	11
Stain and wax-polish woodwork	„	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	„	2	9

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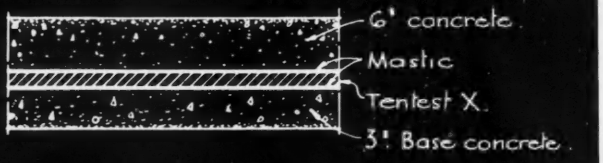
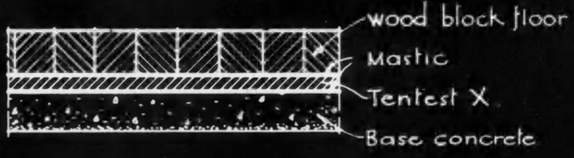
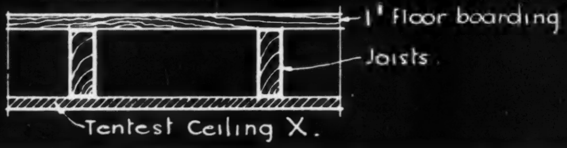
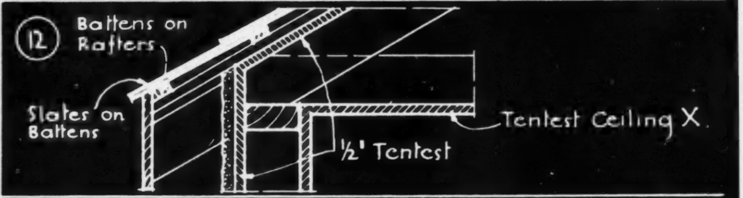
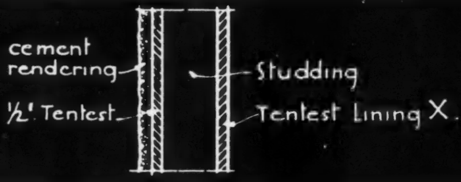
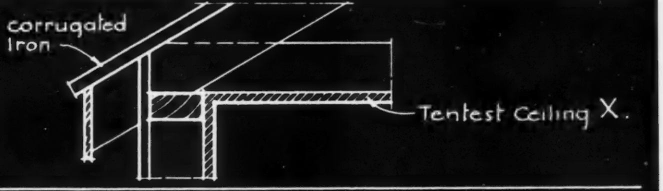
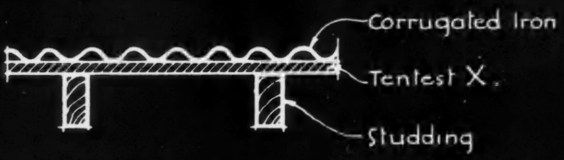
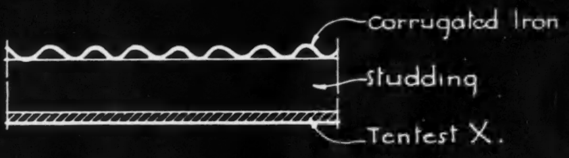
NOTE: The fuel savings are based on a heating period of 210 days with a difference between inside & outside temperatures of 35° F.

Information from The Tentest Fibre Board Co (1929) Ltd.

THICKNESS OF TENTEST IN INCHES AT X.	COEFFICIENT OF TRANSMISSION IN B.T.U.'s PER HOUR PER ° F. / SQ. FT.	ANNUAL COAL FUEL SAVING IN TONS / 1000 SQ. FT. OF INSULATION	MISCELLANEOUS CONSTRUCTION
None	0·637	—	⑨  6" concrete. Mastic Tentest X. 3" Base concrete.
½	0·324	5.25	
5/8	0·288	5.90	
3/4	0·260	6.39	
1	0.217	7.10	
None	0·254	—	⑩  wood block floor Mastic Tentest X Base concrete
½	0·184	1.18	
5/8.	0·171	1.40	
3/4	0·161	1.58	
1	0·143	1.88	
Plaster Ceiling	0·223	—	⑪  1" Floor boarding Joists Tentest Ceiling X.
½	0·173	0.84	
5/8	0·168	0.93	
3/4	0·157	1·11	
1	0·141	1·38	
No ceiling	0·428	—	⑫  Battens on Rafters Slates on Battens Tentest Ceiling X. ½" Tentest
½	0·198	3.88	
5/8	0·184	4.10	
3/4	0·173	4.30	
1	0·153	4.65	
No lining.	0·420	—	⑬  cement rendering ½" Tentest Studding Tentest Lining X.
½	0·198	3·75	
5/8	0·184	4.00	
3/4	0·171	4.21	
1	0·152	4.54	
No Ceiling	1·500	—	⑭  corrugated Iron Tentest Ceiling X.
½	0·332	19.75	
5/8	0·296	20.40	
3/4	0·266	20.90	
1	0·221	21.60	
None	1·500	—	⑮  Corrugated Iron Tentest X. Studding
½	0·460	17.60	
5/8	0·392	18.75	
3/4	0·342	19.60	
1	0·271	20.80	
None	1·500	—	⑯  Corrugated Iron Studding Tentest X.
½	0·441	17.80	
5/8	0·380	18.90	
3/4	0·332	19.80	
1	0·265	20.90	

INFORMATION SHEET: DETAILS OF TENTEST INSULATING BOARD.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

Supplement to THE ARCHITECTS' JOURNAL for December 21, 1933

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INFORMATION SHEET

• 63 •

WALLBOARD

Name of Product : TenTest Fibre Board

Type Illustrated : Insulation of Miscellaneous Structures

Description :

TenTest is an insulating building board used in the construction of Churches, Theatres and Cinemas, Hospitals, Schools, Commercial Buildings, etc., to meet acoustic requirements, to ensure adequate sound or thermal insulation, and to eliminate condensation troubles. It is extensively applied to concrete walls, floors and roof decks, and as an insulating medium under asphalte roof surfaces. Finished with cement roughcast, TenTest is used externally for Domestic Buildings, Sports Pavilions, Club Houses, Hospitals, Schools and Factories.

The following is a brief specification for the application of cement rendering and roughcast to TenTest :—

SPECIFICATION

Cement :

Should be finely ground British Standard Portland cement.

Sand :

Should be clean, sharp and well graded.

Aggregate :

For roughcast or pebble dashing should be clean, hard shingle, or other approved material, well graded from ⅜" down.

Metal Reinforcement :

Small mesh expanded metal strips should be applied over all joints and angles, and for good class work galvanized wire netting 1½" mesh, 18 gauge, should be applied over the entire surface to be roughcast.

Rendering TenTest :

Before applying the reinforcement the surface of the TenTest sheets to be cemented should be slightly damped and then scrubbed with a wire brush. After fixing the reinforcement the TenTest should again be damped and the rendering coat applied, well trowelled through the reinforcement to the surface of the TenTest. The rendering coat should consist of a mortar composed of one part cement to two parts sand. It should not be trowelled to a smooth surface but should be left rough, scratched where necessary and kept damp until the application of the finishing coat.

Finishing Coat :

When the rendering coat is set, but whilst it is still green, the finishing coat should be applied. For roughcast it should consist of one part cement to three parts well graded aggregate applied thoroughly and evenly over the whole surface, care being taken that the wire reinforcement is not left exposed. The completed two-coat work should not be less than ½" in thickness. The whole work should be kept lightly sprinkled with clean water until thoroughly hardened.

Name of Manufacturers	TenTest Fibre Board Co. (1929) Limited
Address	Astor House, Aldwych, London, W.C.2
Telephone	Holborn 8018

Supplement to THE ARCHITECTS' JOURNAL for December 21, 1933 FILING REFERENCE:

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DUNLOP RUBBER FLOORS.

SUITABILITY,

Can be used for practically any type of building,

Households, Public offices,
Hospitals, Schools,
Ships etc.

COLOURS,

There is a standard range of 60 colours.
Special colours are made to requirements.

SPECIAL ADVANTAGES:

- Adaptable to practically any scheme of decoration.
- Extremely hard wearing.
- Fire resisting.
- Silent.
- Hygienic.
- Easily cleaned.

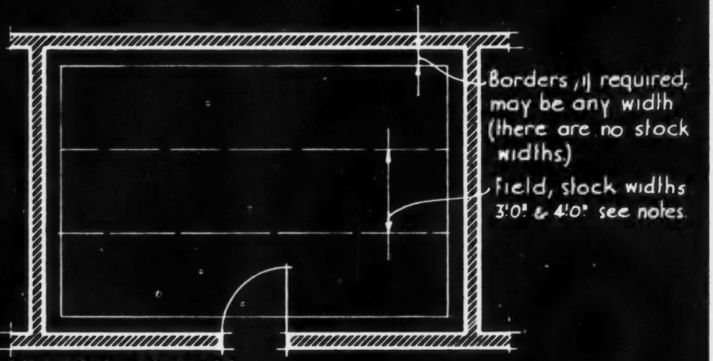
NOTE: Rubber floors are not suitable where sub-floors are damp, or where oil or fat is liable to be dropped on the floor. i.e. kitchens in hotels or hospitals.

TYPE 1. Sheet material,

Sheet material in plain or mottled colour, with or without borders as required.

Maximum sizes of sheets:
in 1/8" & 3/16" thick material, 50'0" x 4'0"
in 1/4" thick material, 13'0" x 4'0"
or 14'8" x 3'0"

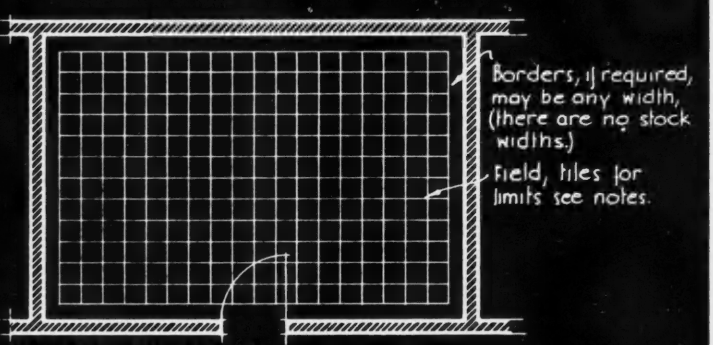
The widths given are stock widths, and for greatest economy these should be worked to as far as possible.


Borders, if required, may be any width (there are no stock widths.)
Field, stock widths 3'0" & 4'0" see notes.

EXAMPLE OF TYPE 1.

TYPE 2. Tiles,

In any colour or design within the following limits:
Minimum size of tile 12" square
Maximum size of tile 4'0" square

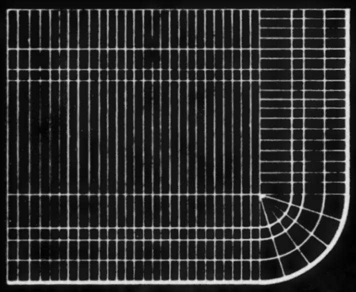

Borders, if required, may be any width, (there are no stock widths.)
Field, tiles for limits see notes.

EXAMPLE OF TYPE 2.

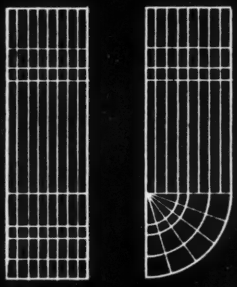
TYPE 3.

Where tiles are of smaller size or where a design other than tiles involving curved lines etc. is required: material can be made up in units with vulcanized joints.

Maximum size of each unit:
14'0" x 3'0"
or 13'0" x 4'0"



EXAMPLE OF DESIGN · TYPE 3.



COMPONENT UNITS

Designs of this type may be built up in any number of colours or any combination of colours.

Information from the Dunlop Rubber Co Ltd.

INFORMATION SHEET. VARIOUS TYPES OF DUNLOP RUBBER FLOORS.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

Supplement to THE ARCHITECTS' JOURNAL for December 21, 1933.

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INFORMATION SHEET

• 64 •

FLOORS (RUBBER)

Name of Product : Dunlop Rubber Floors.

Types Illustrated : Sheet Material, Tiles and Units with vulcanized joints.

Description :

In this sheet the three methods of fixing rubber floors are shown. The prices are :

Supplying, fitting and fixing,

Sheet Material	$\frac{1}{8}$ in.	$\frac{3}{16}$ in.	$\frac{1}{4}$ in.
	9/6	11/6	16/6 sq. yd.
Tiles, 12 in. and over	12/6	14/-	19/- ,, ,,

Prices for Tiles under 12 in. and for special designs will be supplied on application.

NOTE. As these prices are only approximate, it is advisable to obtain definite quotations for each particular job.

Name of Manufacturers : Dunlop Rubber Co. Ltd. (General Rubber Goods Division)

Addresses :

Manchester Cambridge Street

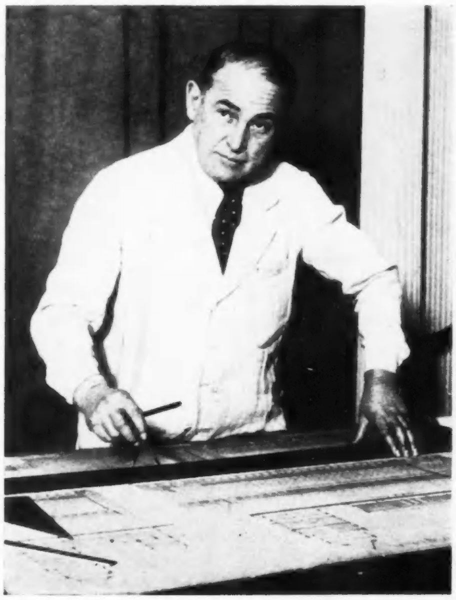
London Rubber House, Brooke's Market, E.C.1

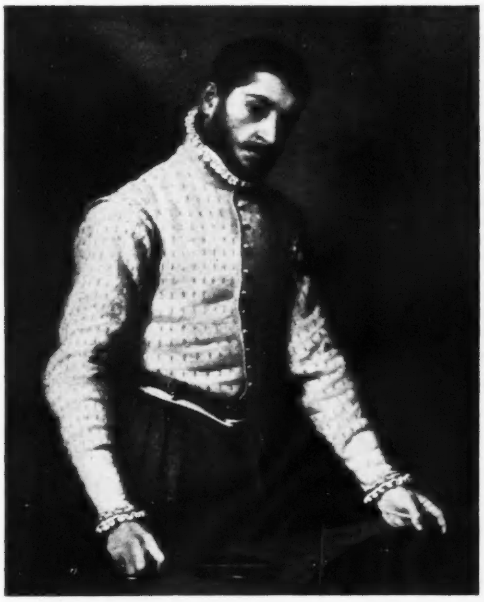
Birmingham Livery Street, 3

Glasgow 46/70 North Wallace Street

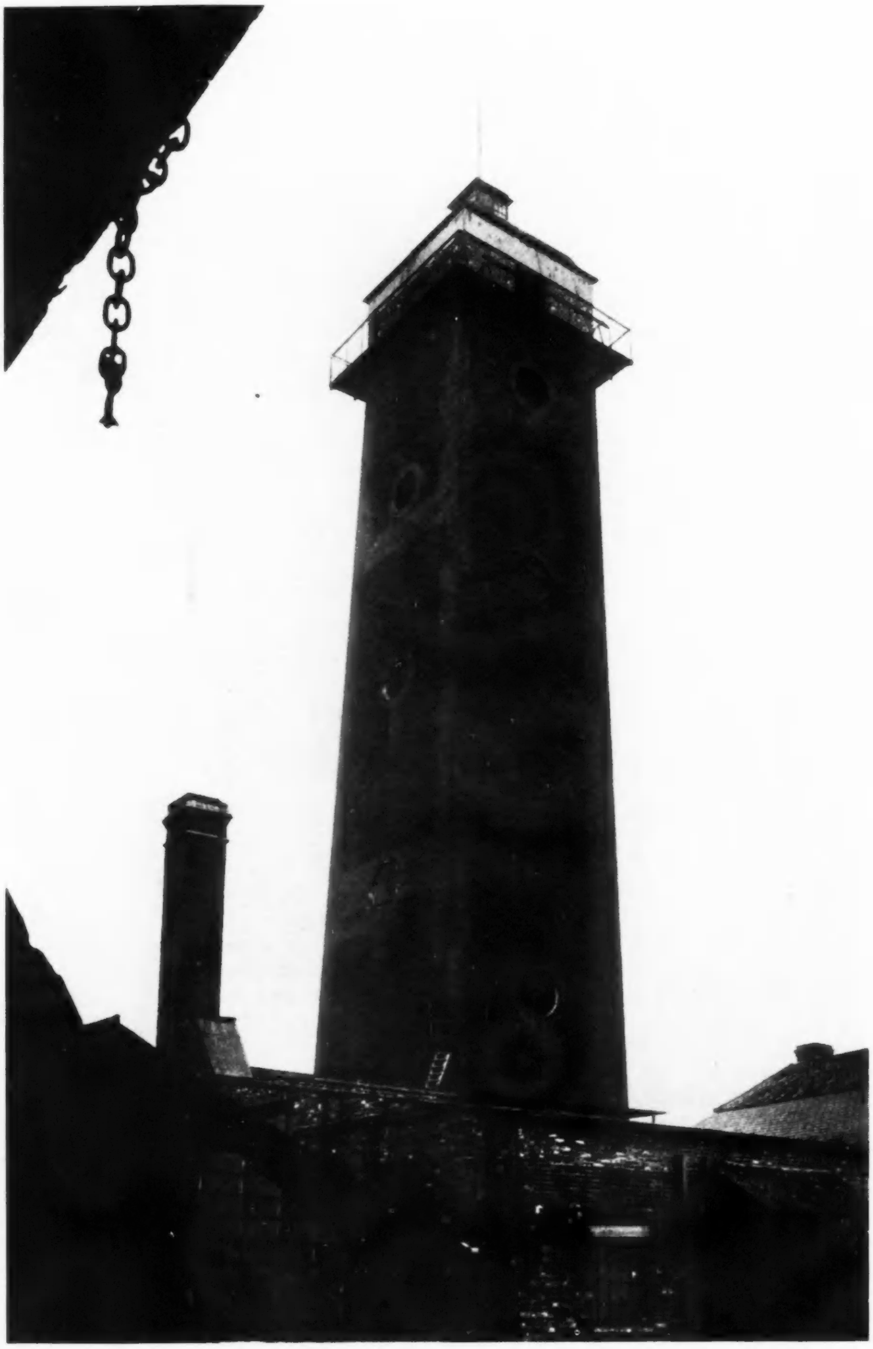
PORTRAIT COINCIDENCE

DISCOVERED BY THE DAILY TELEGRAPH



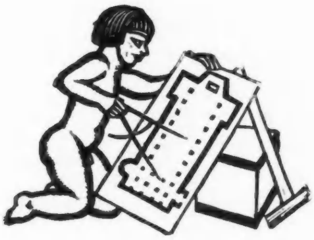


THESE two portraits were reproduced last week in THE DAILY TELEGRAPH *under the above heading. The caption ran: "On the left is a recent camera study of Mr. Vincent Harris, the architect who is to design the new Government building in Whitehall. A striking similarity of pose is to be observed in the "Portrait of a Tailor," by Moroni (c. 1525-1578), in the National Gallery.*



A PASSING LANDMARK

The familiar shot tower, that stands on Shot Tower Wharf near the Blackfriars end of Waterloo Bridge, and whose coming demolition has recently been announced. It was erected shortly before 1815, and is believed to be the design of Benjamin Wyatt. The tower, and the two sculptured sphinxes at its foot, form together a fine architectural composition, that can be seen only from the river.



THE NEW CUNARDER

QUITE one of the most important matters connected with the resumption of work on the new Cunarder has been unhonoured by discussion by our statesmen, and by all the vocal gentlemen who have at heart the commercial prosperity of this realm. We have been reminded that when work on the ship was stopped "about £2,000,000" had been spent, and that she will cost "nearly another £4,000,000" to complete. We know she will be 1,018 ft. long, that her displacement will be far greater than that of the ill-starred *Titanic*, 73,000 tons as against 60,000; we know that she will be a masterpiece of engineering; we know that in every structural detail, in every mechanical device, she will be a cause for national pride. But we do not know what this proud shell of metal, locked and braced with such perfect skill, will contain apart from its superb engines and its storerooms, kitchens and well-ventilated quarters for the crew; we do not know whether the directors of the Cunard Company will follow the common British practice of providing surroundings for the passengers that, as Astragal said in this JOURNAL last week, suggest that her name might be *Jacoberia* or *Tudoria*.

When, with a flourish of trumpets, the Government announced that it intended to help a maritime nation to keep its name before the world, there was no suggestion that anybody in authority had considered the immense power they were putting into the hands of the Cunard directors for making the nation look ridiculous. Nobody hinted that a Tudor saloon, a Jacobean lounge, or a Louis drawing-room might eventually be more harmful to our national prestige than a failure to resume work on Cunarder No. 534. There was much talk of foreign competition, particularly in respect of freight-carrying ships; but nobody mentioned the sort of competition we have to fight by neglecting intelligent design in the interior architecture of our liners.

That sort of competition was not mentioned, because the "worrld veesion" of our statesmen cannot apprehend such details, because the "practical" politicians cannot see anything except votes (and they're a bit hazy about those elusive affairs), and because the shipowners of olde England think that the ability to gut an old house and refurbish the historical loot drawn therefrom for use inside a ship is being "modern." Mr. John de La Valette, the well-known organizer of the great 1935 Exhibition of Industrial Art, recently suggested, with deplorable lack of gallantry, that ladies demanded the sort of olde-worlde interiors that shipowners insisted upon providing for our travels. But French, German and Italian shipowners don't run their ships for men only; and the ships of other nations are providing the most serious competition for our passenger traffic, because their owners are living in the twentieth century, and giving their passengers the stimulating surroundings that belong to this most stimulating and exciting century.

In industry we are beginning to recognize our deficiencies, and to appreciate that the missing technician in hundreds of factories is the designer. There is a new spirit of enquiry abroad in the industrial world; a willingness to experiment in matters of design, a readiness to accept new ideas. So much the better for British trade. But what respect or confidence shall we earn from the traders of other nations, the people who buy our goods, if we ferry them across the Atlantic in sham Elizabethan or Georgian settings? How will they appraise our invention and intelligence as they sit about the glowing glass logs of an electric radiator in a brick and oak-beamed inglenook? Only when they leave the saloons and cabins and walk in the open air will they see sleek, streaming steel shapes, planned to cheat the wind, and know what a triumphant and lovely work of man is carrying them.

Is the new Cunarder going to let down what little progress we have made in industrial design? Will it proclaim to the world that we are a nation of blind engineers? Will it perpetuate the tradition that we have to display our skill in engineering in the most inappropriate way; as we did when, in the Argentine Exhibition some years ago, we showed locomotives in an old-worlde village? The directors of the Cunard company have a great responsibility. They are in competition with foreign shipowners who can make surroundings on board ship accord with contemporary civilized taste. If they are unaware of this aspect of competition, then they are unfitted to bear the responsibility.

The Architects' Journal
9 Queen Anne's Gate
Westminster, S.W.1
Telephones: Victoria
9212-7
Telegrams:
Buildable
Parl
London

NOTES & TOPICS

"POOR RELATIONS"

THIS time-honoured (if somewhat vague) expression, after dwindling down the last few decades, has come to rest (or roost) upon a new-born and almost revolutionary activity of the Royal Institute of British Arhitects.

*

I refer, of course, to the Public Relations Committee (" Committee " being the operative word).

*

The time will, I hope, come when the policy of the R.I.B.A. in the matter of its social and sociological responsibilities will be so intricate and complex that only careful thought and interchange of personal views can determine the nature and method of presentation to the public of its attitude of mind.

*

But meanwhile the profession has got to realize that these responsibilities exist, and get down to tackling them.

*

Obviously it is a matter in which we should all congratulate ourselves, that the R.I.B.A. has discovered, at long last, that it is, in some way, linked up with the public; and that this public should be kept informed of what architects, as a profession, are thinking and doing.

*

But why, in these preliminary stages, a committee? Why not delegate the work to one man, and leave him to do it, and report afterwards?

*

In such a delicate matter as (pardon the word) publicity, a single train of thought and a definite plan are necessary. The personal element, however well disguised, is the important thing—with the press, on which all results depend.

*

To this confounded "Committee" do I trace the recent most unfortunate harping on things which had been better left alone; and, too, the silence about matters on which the R.I.B.A. should have been vociferous even if vague.

*

Slum, for instance.

THE WHITEHALL BUILDINGS

After inviting the R.I.B.A. to nominate ten candidates for the job of designing the new building in Whitehall; fixing a rigorous age limit; forgetting the one man who knows most about the problem (having been at it before); appointing a rather mixed crew to select a suitable man from the R.I.B.A. list ——

*

——what does the Office of Works do but *pick* (wisely) Mr. Vincent Harris, who should, from general experience, special knowledge and common fairness, have had the job, without any fuss, list or palaver at all?

*

However, it all made a stir in the daily papers, and the word " architect " has again been associated with the official state.

*

We progress.

*

The Daily Express, especially, put the matter in a form which its public can readily absorb; and architecture is an art and we must be grateful. It talked of Vincent Harris's nineteen-year-old disappointment, which, I read, " he gradually forgot."

*

" His jet-black hair turned grey and thinned at the temples. His back became bowed by years of stooping over his drawing-board. . . ."

*

So it runs. But the Great British Public loves it all.

NORDIC ROOFING

Flat roofs, I hear, have been scheduled as Semitic under the Nazi architectural régime. Eastern and all that. Down with the " art of the left " And on with the thatch and gables (or Goebells, will they be called in future?).

*

The mixture of politics and architecture is something new in the world, although I suppose one could delve for precedents. But surely the remark made by a German professor not so long ago that the modern movement in building had achieved more devastation than the thirty years' war, is a wholly original manifestation of political and racial propaganda.

*

It's nice to know that steel and concrete have beaten blood and iron at their own game.

LONDON NIGHT LIGHT

During the last two years the shape and colour of London's streets at night have changed. In the main

T. S. Tait, F.R.I.B.A. (of Sir John Burnet, Tait and Lorne), who has been appointed architect for the new Government offices, Edinburgh.

shopping streets the buildings acquire a new character at night that is independent of their daytime elevations.

*

The change is due to the huge increase in neon lighting. Neon tubes allow the lines of a façade to be embellished with light, and they do not impose on that façade a complex mess of framework, unsightly by day and spotty and dazzling with its myriad bulbs by night.

*

Landlords and tenants of buildings where neon is used would increase the attractiveness of this night lighting vastly, if they called into consultation the architects who originally designed the elevation.

*

Maybe it isn't too optimistic to hope that one day the use of neon on an elevation will be anticipated when a building is designed, and provision made for its effective use.

CHARLES MARRIOTT

It is not the invariable rule that the most obvious choice is also the best one; but certainly the R.I.B.A. could not have made a better choice than it did when it invited Mr. Charles Marriott to deliver the first paper in the new session on "Contemporary London Buildings," and to arrange for it to coincide with the presentation of the London Street Architecture Medal. His paper will have done much to help those who are now filling in their nomination forms for the 1933 medal.

*

Since 1924, when he became Art Critic to *The Times*, Mr. Marriott has worked hard and consistently for the cause of public enlightenment on architectural matters. He and Mr. James Bone have probably done more in this way than any other living people.

*

At sixty-four, he is a very much "younger" man than many twenty years his junior; his views are sound, and, when he disapproves, his criticisms are made with an affectionate pungency which drives home the spear, without the cruelty of which most critics are guilty.

Incidentally, I recently overheard a nice little incident, at Fortnum and Mason's exhibition of Aalto furniture.

*

Mr. Marriott was introduced to Mr. Alvar Aalto, to whom he said: "Ah! You are a Finn, are you? I met a Finn a year ago at Brussels." To which came the reply: "Ah! You are an Englishman. You sent a bishop out to us a long time ago. We ate him."

THE USE OF MATERIALS

A hermit craftsman said to me the other day: "How the men of the Middle Ages would have scorned these shoddy modern building materials that are ruining the face of England."

*

He seemed ready at any moment to burst out into a song of praise for the Merry England that exists only in the minds of Messrs. Chesterton and Belloc; so I suggested quickly that the mediæval craftsman would have got far more out of modern materials than the jerry builder bent merely on disguise and imitation.

*

And last week I saw one of the best and most inventive uses of modern materials. No mediæval designer dreamt of reinforced wired glass and metal-faced plywood, but in this job they were used with the same large command of God's own common sense that is apparent in the pre-reformation buildings of England.

*

It was at the swimming bath extension, Sittingbourne, Kent, in the dressing-room cubicles, where standard units had been arranged to provide the maximum of economy in space, and in the control office at the entrance to the baths.

*

The extension and its equipment were designed by Mr. M. W. Lashmar. It is heartening to think that up and down England, amid the waste of speculative buildings and inept municipal enterprise, there must be some more examples of sound building sense; quietly competent answers given to all the questions that are debated too often as matters of æsthetics.

ASTRAGAL

THE ARCHITECTS' DIARY

Friday, January 5

INSTITUTION OF SANITARY ENGINEERS. At *Caxton Hall, S.W.* Presidential Address. By G. M. C. Taylor. 6 *p.m.*

Monday, January 8

R.I.B.A. At 9, *Conduit Street, W.*1. Award of Prizes and Studentships. Criticism by G. Grey Wornum. 8 *p.m.*

Tuesday, January 9

ARCHITECTURAL ASSOCIATION. At 34–36 *Bedford Square, W.C.* "The Architect's Contribution to the Thought of his Time." By Hope Bagenal. 8 *p.m.*

Wednesday, January 10

LIVERPOOL ARCHITECTURAL SOCIETY. "Central London—its Post-War Development." By T. A. Darcy Braddell. 6 *p.m.*

INSTITUTION OF WELDING ENGINEERS. "Development of Welding as applied to Boiler Drums and Steam Receivers." By C. H. Davy. 7.45 *p.m.*

MANCHESTER SOCIETY OF ARCHITECTS. "Landscape Plans for the Parish of Broadway, Worcestershire—Past, Present and Proposed." By G. A. Jellicoe. 6.30 *p.m.*

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS. At *Southampton Row, W.C.* "English Mediæval Architecture." By Sir Banister Fletcher, F.S.A., PP.R.I.B.A. 6 *p.m.*

NEWS

●

POINTS FROM THIS ISSUE

Is the new Cunarder going to let down what little progress we have made in industrial design ? *813*

The Stockholm Competition Result.... *817*

" The economic policy of the Government has, however, prevented the continuance of the scheme "........ *819*

The Scots, like the Irish, are not naturally a gregarious people *832*

On the roof a slowly revolving café, to provide a continually changing view for those inside *835*

●

NEW GOVERNMENT BUILDINGS

Mr. Guy, in Parliament last week, asked the First Commissioner of Works if he could now make any further statement with reference to the proposed scheme for new Government buildings in Edinburgh.

Mr. Ormsby-Gore said that after consideration of the recommendation of the Selection Committee appointed for the purpose, he had invited Mr. Thomas S. Tait to act as architect for the building, on the terms mentioned in his reply on November 30, and he was glad to be able to say that Mr. Tait had intimated his acceptance.

Mr. Petherick asked the First Commissioner of Works if he would state what was the present position in regard to the selection of an architect for the new Government building in Whitehall.

Mr. Ormsby-Gore said that after consideration of the recommendation of the Selection Committee appointed for the purpose, he had invited Mr. E. Vincent Harris to act as architect for the building on the terms mentioned in his reply on November 30, and he was glad to be able to say that Mr. Harris had intimated his acceptance.

Mr. Boothby asked the First Commissioner of Works whether the design for the National Library buildings was to be put out to open competition.

Mr. Ormsby-Gore replied : " No, Sir."

THE BUILDING INDUSTRY'S POSITION

CHRISTMAS, 1933

This time of the year is never so cheerful for the building trades as for some other industries by reason of the seasonal decline in activity. Nevertheless, the Committee feel that the industry has some cause for congratulation.

The numbers unemployed in the building trades at the end of November were the lowest in any November since 1930. There are 77,400 fewer unemployed than in November, 1932, and 43,900 fewer than in 1931. The estimated cost of building plans approved in November, 1933 (£7,260,700), was higher than the figure for any November since these statistics began in 1924.

The Committee are pleased to report that they believe their efforts have contributed to a definitely higher level of activity this Christmas than for some years past, resulting in employment for 77,400 more operatives than last year.

The Committee hope that the industry will continue its support in the coming year as during the past year, thus enabling the Industry still further to improve its position.

Subscriptions to the fund of the Special Committee for Public Relations of the Building Industries National Council should be addressed to Mr. Oswald Healing at 5 Duke Street, W.C.2.

BRIGHTON RACE TRACK

The Portslade U.D.C. have asked the Brighton Council to defer their decision on a £100,000 scheme to build a motor-racing track on the Downs.

SLUM CLEARANCE

The Minister of Health has directed inquiries to be held under the Housing Acts in a number of towns as to the adequacy of the slum clearance programmes.

Inquiries will be held at an early date in the following towns :—

Bootle Croydon
Durham City Leicester
Lewes Maidstone
Margate Widnes
Whitby Willesden
Worthing

UNEMPLOYED ARCHITECTS' GIFT TO THE QUEEN

The Queen has accepted a copy of the drawing of Carlton House Terrace, entitled " The Mall as Existing in 1933," which has been prepared by unemployed members of the architectural profession working under the scheme organized by the London Society, in collaboration with the Architects' Unemployment Committee of the Royal Institute of British Architects.

NATIONAL SMOKE ABATEMENT SOCIETY

The memorandum recently issued by the National Smoke Abatement Society to all housing authorities in Great Britain contains a warning as to the rapid degradation of new housing estates, as the result of atmospheric polution. The memorandum states : " The connection between slums and dirt is obvious, and, although dirt is intensified by poverty and overcrowding, its origin is principally the smoke deposit which falls most heavily in densely crowded areas. The campaign against smoke is an essential part of the campaign against slums, and the amenity value of a smokeless atmosphere and its effects upon health and cleanliness are considerable.

" The question of property maintenance and repair, which operates during the whole period of existence of the property, is an important factor in costs, and there is no doubt that it is considerably increased by the dirt and corrosive action of coal smoke deposit."

R. I. B. A.

SESSIONAL PAPERS

Owing to pressure of work Mr. Percy Thomas, O.B.E., F.R.I.B.A., has found it necessary to postpone, until the 1934-1935 Session, the paper on " The Planning of Municipal Buildings," which he was due to read on May 28, 1934. Mr. W. G. Newton, F.R.I.B.A., has consented to take Mr. Thomas's place and to bring forward to May 28 the paper on " The Planning of the Public School," which he had already agreed to read at a later date.

LECTURES TO CHILDREN

The seventh series of informal talks on architecture to boys and girls will be given at the Institute on Monday, January 1 ; Wednesday, January 3 ; and Friday, January 5, at 3.30 p.m. Mr. E. R. Jarrett, A.R.I.B.A., is to deliver the series. Tickets for any or all the lectures may be obtained from the Secretary of the R.I.B.A., 9, Conduit Street, W.1.

THE INTERMEDIATE EXAMINATION

The R.I.B.A. Intermediate Examination qualifying for election as Student R.I.B.A. was held in London, Belfast, Hull, Manchester, Newcastle-upon-Tyne and Plymouth last month.

Of the 189 candidates examined, 56 passed and 133 were relegated. The successful candidates are as follows :—

H. O. Bailey, W. J. Bayliff, (Miss) H. B. Blaker, A. C. Braven, L. S. Broad, J. H. Brunton, A. B. Carter, P. J. Carter, T. L. J. Chamberlain, L. Cooke, W. Cowan, E. W. Cowell, C. V. Crane, F. W. Davey, A. H. Davis, N. G. Denham, H. Fedeski, F. Fielding, (Miss) B. L. Filmer, G. A. Fox, R. H. Fox, J. M. Harrison, H. W. G. Hawkes, R. G. Heseltine, L. R. Howlett, F. G. Jackson, N. K. Jarvis, A. E. Jeffrey, N. S. Johnson, B. C. King, E. G. Knight, A. R. Leggett, M. H. Lister, H. Lumb, O.

D. Manning, G. B. Mennell, R. P. Mills, E. L. Morgan, N. E. Morris, R. G. Nicholls, D. B. Nield, L. J. North, J. L. Parnaby, P. F. Reynolds, E. H. Richards, A. H. Roy, R. E. Shapley, R. F. Smith, R. S. Smith, J. R. Stower, C. R. Thorp, R. W. Toms, C. A. Townsend, F. A. Turner, A. W. Walls and J. W. Worth.

THE LICENTIATESHIP

The Council have decided that after December 31, 1933, no applications for admission to membership as Licentiates will be considered unless the candidates' names have been entered on the Register of Registered Architects.

SCHOOLS OF ARCHITECTURE

The Council of the Institute, on the recommendation of the Board of Architectural Education, has decided to grant recognition for exemption from its Final Examination to the following Schools :—

The Department of Architecture, University of Sheffield.

The Armstrong College School of Architecture, University of Durham, Newcastle-upon-Tyne.

Recognition for exemption from the R.I.B.A. Intermediate Examination has been granted to the School of Architecture of the Dundee Technical College and School of Art, while the Architectural School of the Portsmouth Municipal School of Art and the Architectural Department of the Hull College of Arts and Crafts have been granted permission to submit school drawings in lieu of the Testimonies of Study for the Intermediate Examination.

FINAL EXAMINATION

Attention is called to the fact that candidates in the R.I.B.A. Final Examination will in future be required to precede their theses with a table of contents showing the main sub-divisions of the theses.

R.I.B.A. MEDALS FOR STUDENTS OF RECOGNIZED SCHOOLS OF ARCHITECTURE

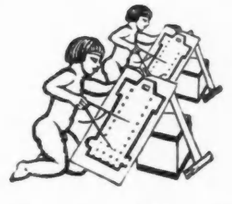
The Council of the R.I.B.A., on the recommendation of the Board of Architectural Education, have made the following awards :—

R.I.B.A. Silver Medal and £5 in Books :—The R.I.B.A. Silver Medal and £5 in Books for Schools of Architecture recognized for exemption from the R.I.B.A. Final Examination has been awarded to Mr. E. T. Dowling, of the Architectural Association School of Architecture.

R.I.B.A. Bronze Medal and £5 in Books :—The R.I.B.A. Bronze Medal and £5 in Books for Schools of Architecture recognized for exemption from the R.I.B.A. Intermediate Examination has been awarded to Mr. N. C. Westwood, of the Architectural Association School of Architecture.

Certificates of Honourable Mention have been awarded to the following : Messrs. H. Gibberd (Birmingham School of Architecture), F. W. Griffiths (Liverpool School of Architecture, University of Liverpool), and Miss Mary Drysdale (School of Architecture, Edinburgh College of Art).

COMPETITION NEWS



STOCKHOLM REPLANNING COMPETITION

As we go to press we learn that the prize money (45,000 Kronor = £2,300) in the competition for a town-plan for Lower Norrmalm, Stockholm, is to be divided between three competitors, namely, those submitting plans number 145, (a Swedish firm), 271 (Messrs. B. Hume and Raymond Erith, of London), 295 (Messrs. C. H. Platt, W. Platt, G. Platt and J. M. Cates, of New York).

The designs submitted by the following competitors have been purchased by the organizers of the competition : Messrs. H. Lubke, Edi Reissner, W. I. Wagener, W. I. Schöne (Berlin) and Halle (Saale) ; M. Reissinger (Dusseldorf) ; and Wolf Richter (Dresden) and Brolin (Stockholm). Each of the three designs have been purchased at a cost of 5,000 Kronor (£256).

It is hoped to publish the winning plans, and a review of the competition, in an early issue.

LAY-OUT OF BUILDING ESTATE, CARDIFF

We are informed by Mr. Percy E. Thomas, F.R.I.B.A., the assessor in the competition for the lay-out of a building estate at Cardiff, that the result will be announced during the next few days. Over eighty sets of drawings were submitted.

PLANNING COMPETITION, PALESTINE

We have received the following communication from the London correspondent of a Palestine paper :

"The township of Tel Aviv, Palestine, have announced an architectural competition, open to all architects resident in Palestine or abroad, for a plan for the development of the sea shore. The first prize will be £(P)200, the second prize £(P)100, and the third prize £(P)50. Plans must be submitted not later than February 1, 1934. Conditions and particulars of the competition may be obtained on application to the Secretary, Technical Department, Town Hall, Tel Aviv, Palestine, on payment of 750 mils (about 15s.)."

DECORATION OF A CAFE-RESTAURANT

We understand that the result of the competition (organized by Messrs. Jenson and Nicholson) for the decoration of a café-restaurant will be announced within the next fortnight. The latest date for submission of designs was December 15.

Competitions Open

December 29.—Sending-in Day. Proposed Entertainments Hall, etc., for the Borough of Bexhill. Assessor : Thomas S. Tait, F.R.I.B.A. Premiums : £150, £100 and £75. Conditions, etc., obtainable from Mr. S. J. Taylor, Town Clerk, Town Hall, Bexhill-on-Sea. Deposit £1. The conditions were reviewed in our issue for September 28.

January 13, 1934.—Sending-in Day. Proposed Public Elementary School, to be erected on a site in Han Lane, Coventry, for the City of Coventry Local Education Committee. Open to architects whose offices are situate within the City of Coventry on November 1, 1933. Assessor : C. E. Bunch, F.R.I.B.A. Premiums : £100, £50 and £30. Last day for questions was November 18. Designs are to be submitted to Frank H. Harrod, Director of Education, The Council House, Coventry, by January 13.

January 15, 1934.—Designs of electrical kitchens suitable for (1) a house (or flat) valued at £300-£400 (net building cost without land), and (2) a house (or flat) valued at £800-£900 (net building cost without land), for the British Electrical Development Association. Assessors : R. S. Downe, M.I.E.E., Francis Lorne, F.R.I.B.A., Lionel G. Pearson, F.R.I.B.A., A. C. Cramb, M.I.E.E., M.I.M.E., and Miss Maughan, M.SC. Premiums : £50 and £25, for each section. Designs are to be sent to the Association at 2 Savoy Hill, W.C.2, not later than January 15, 1934. Conditions, etc. (Price 1s.), are now obtainable.

Competitions Pending

Proposed New Council Offices to be erected at Salt Hill for the Slough U.D.C. Assessor : H. S. Goodhart-Rendel, F.R.I.B.A. Premiums : £150, £100 and £50. Conditions have not yet been drawn up.

Proposed Extensions to the Town Hall, Swindon. Assessor : Professor A. B. Knapp-Fisher, F.R.I.B.A. Conditions have not yet been drawn up.

Proposed Municipal Sanatorium and Craymount Children's Hospital, Belfast. Premiums : 500 guineas, 300 guineas, and 100 guineas. Limited to architects practising in Northern Ireland. Assessor : R. S. Wilshere, A.R.I.B.A.

Proposed Mental Colony (to accommodate 500 patients) for the Stoke-on-Trent City Council. Premium £300. The conditions of the competition are not in accordance with the Regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promotors in the hope of securing an amendment. In the meantime Members of the Institute should not take part in the competiton.

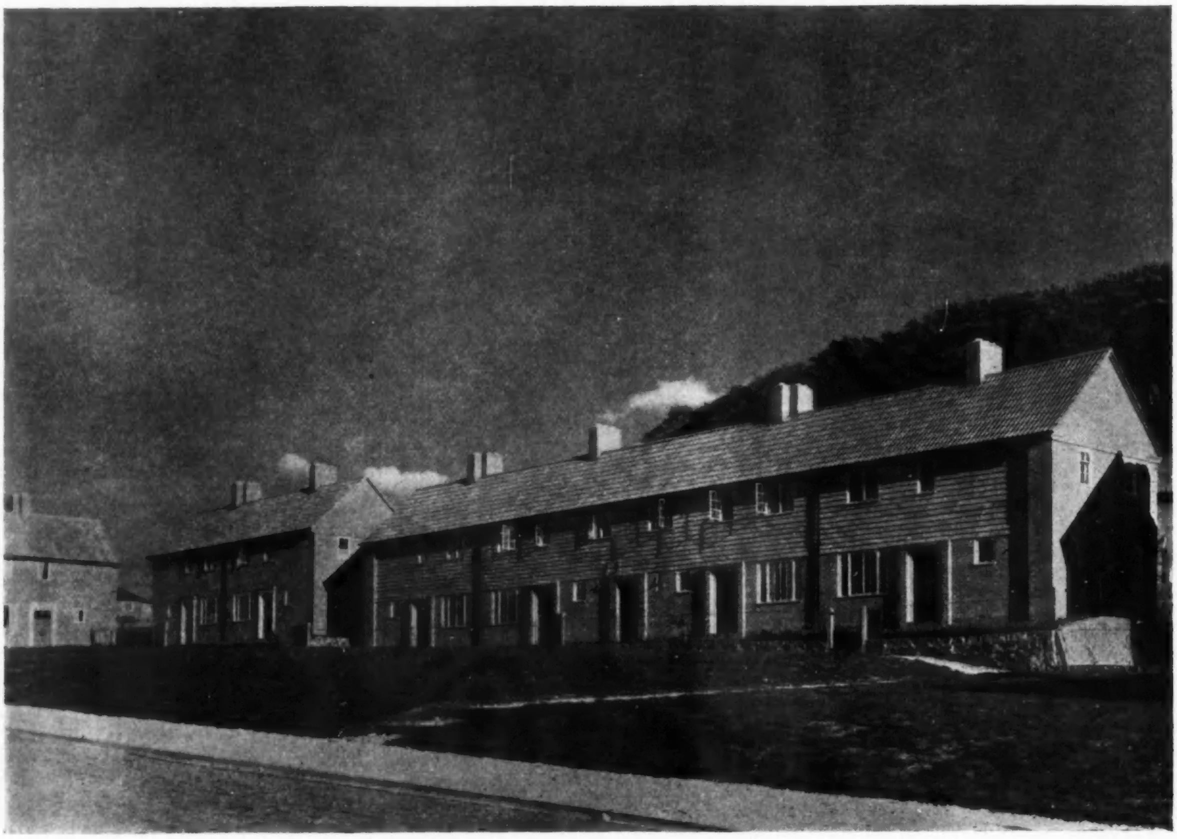
OBITUARY

W. G. R. SPRAGUE

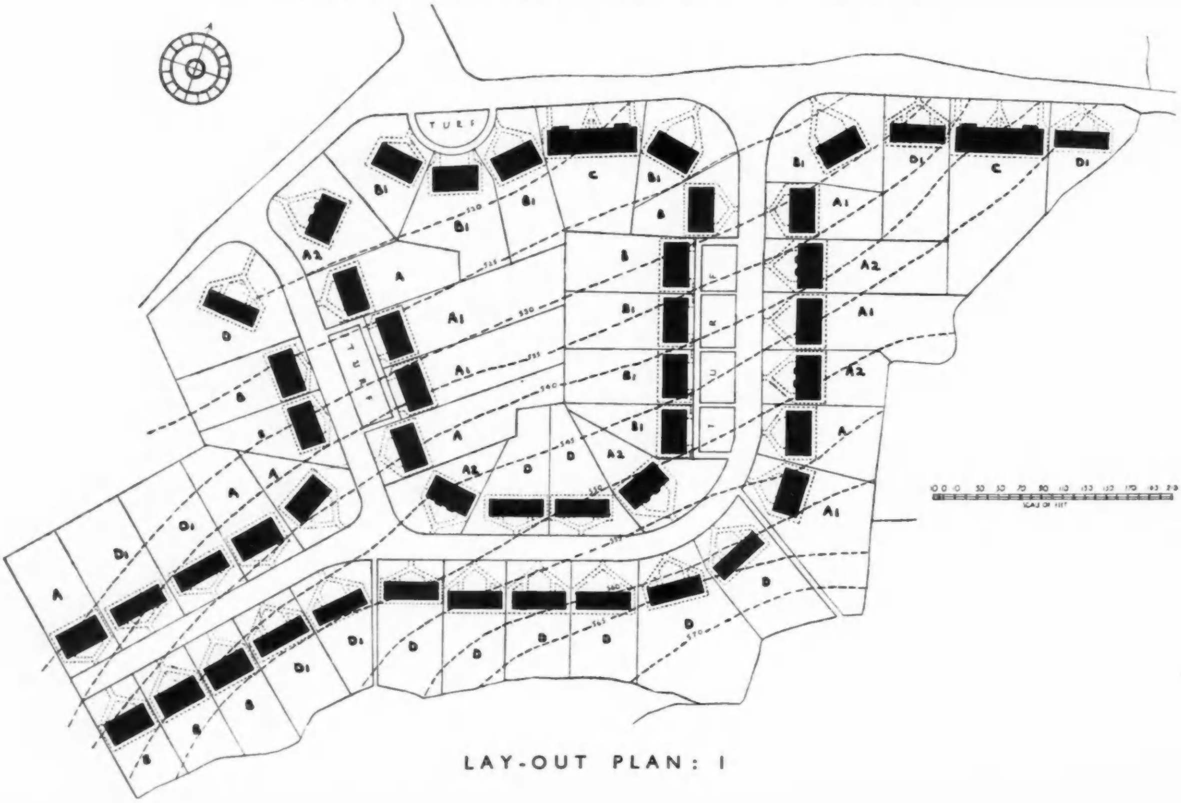
We regret to record the death of Mr. W. G. R. Sprague, which occurred recently in his 69th year, of heart failure at his home at Maidenhead. He was a member of the firm of Sprague and Burton, architects.

Among the West End theatres designed by him were the Ambassadors, St. Martin's, the Aldwych, Wyndham's, the Globe, the New, the Queen's, and the Strand. One of his latest pieces of work was the Streatham Hill Theatre. He was also architect of the King Edward VII Theatre in Paris.

HOUSING SCHEME AT STOURBRIDGE:

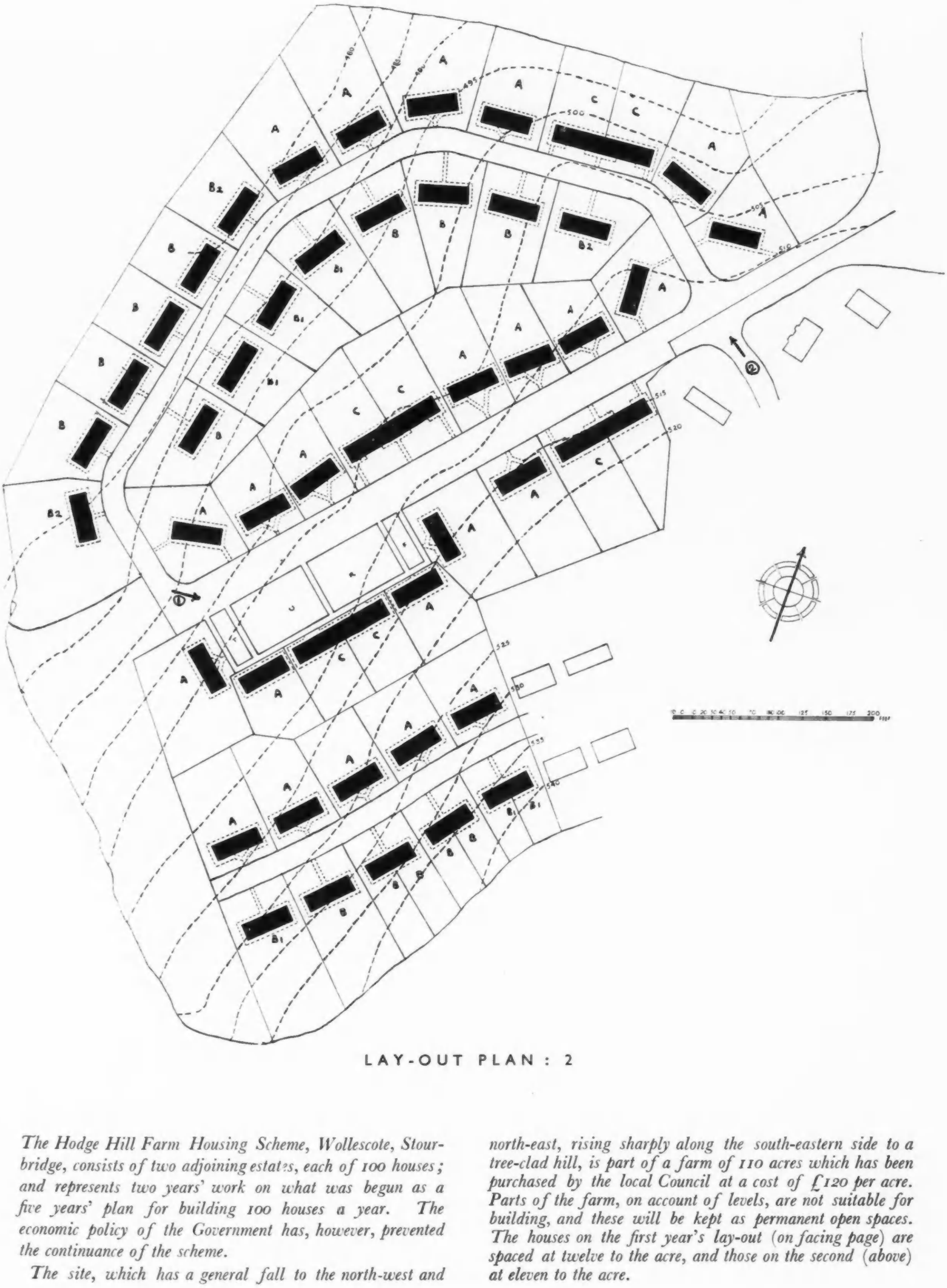


View taken from point marked 1, on plan on facing page, showing houses types A and C.



LAY-OUT PLAN: 1

BY FOLKES AND FOLKES

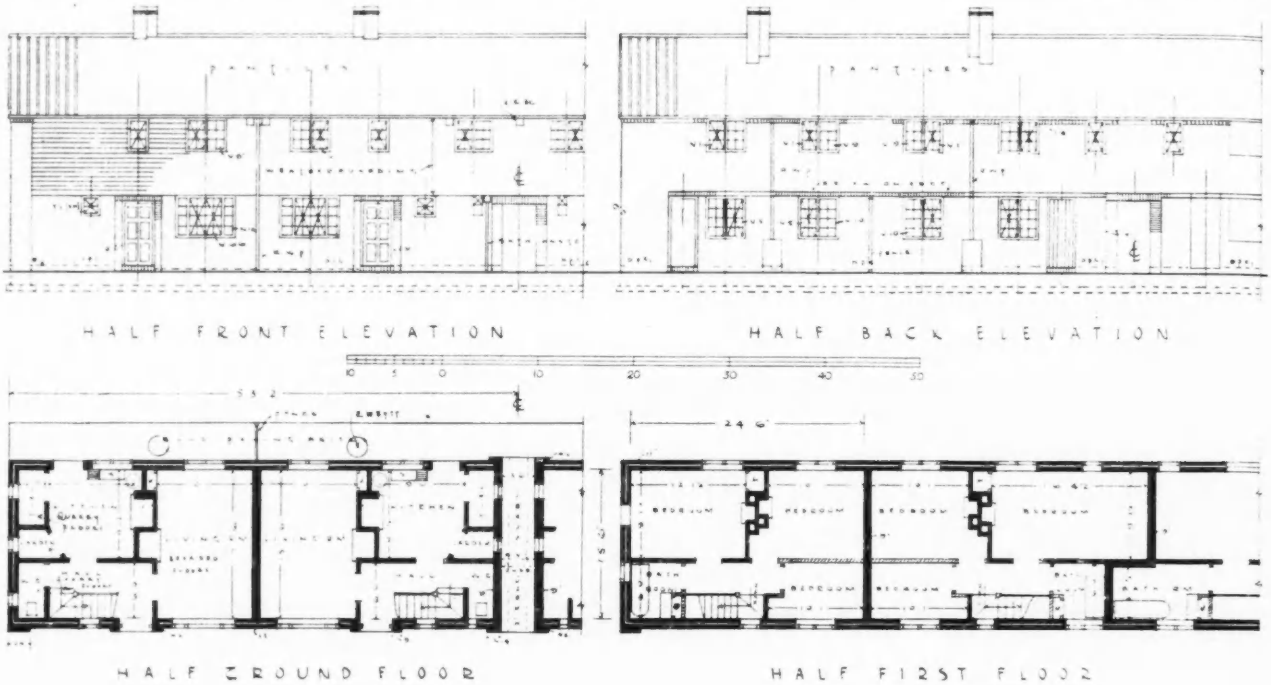


LAY-OUT PLAN : 2

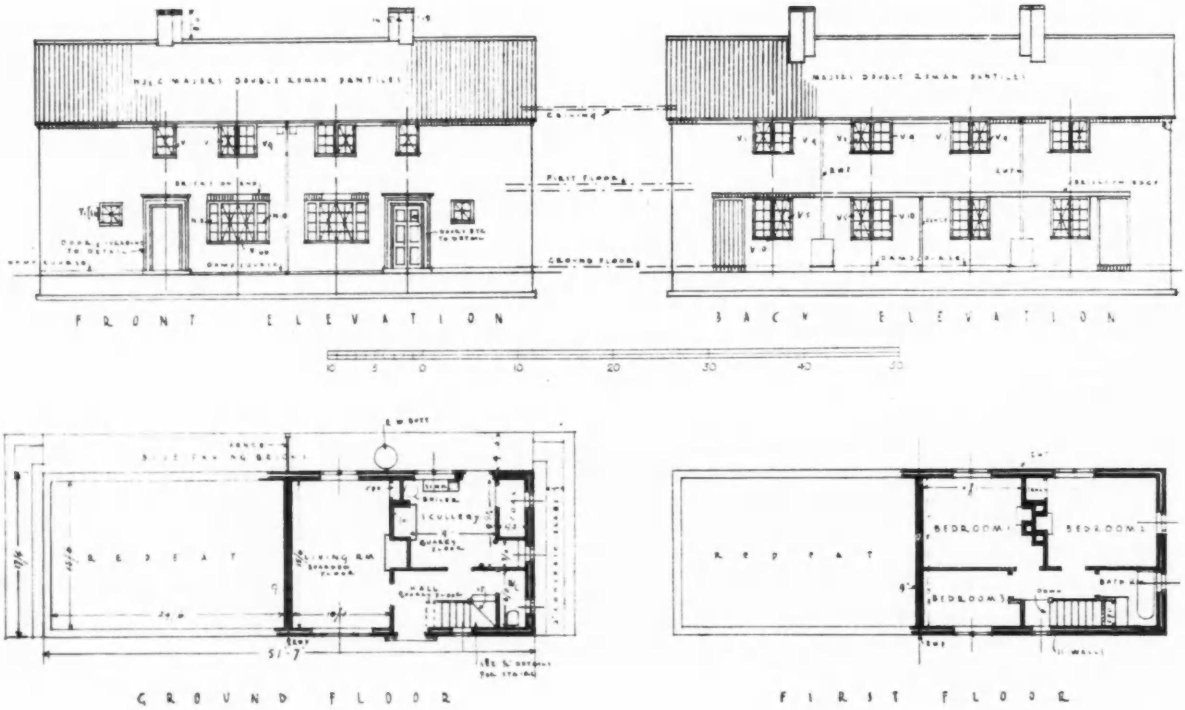
The Hodge Hill Farm Housing Scheme, Wollescote, Stourbridge, consists of two adjoining estates, each of 100 houses; and represents two years' work on what was begun as a five years' plan for building 100 houses a year. The economic policy of the Government has, however, prevented the continuance of the scheme.

The site, which has a general fall to the north-west and north-east, rising sharply along the south-eastern side to a tree-clad hill, is part of a farm of 110 acres which has been purchased by the local Council at a cost of £120 per acre. Parts of the farm, on account of levels, are not suitable for building, and these will be kept as permanent open spaces. The houses on the first year's lay-out (on facing page) are spaced at twelve to the acre, and those on the second (above) at eleven to the acre.

HOUSING SCHEME AT STOURBRIDGE:

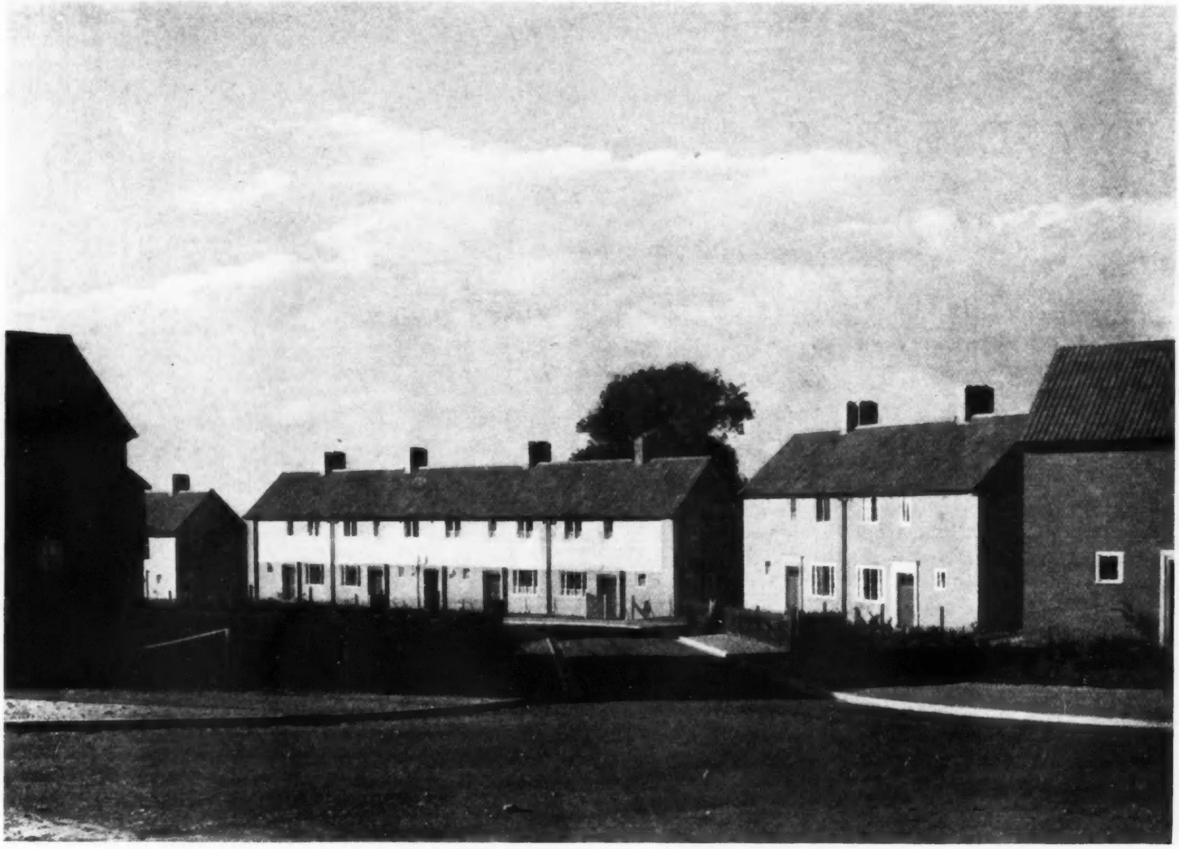

PANTILES
PANTILES
HALF FRONT ELEVATION
HALF BACK ELEVATION
10 5 0 10 20 30 40 50
53' 2"
E.W. BUTT
24' 6"
15' 6"
KITCHEN
QUARRY FLOOR
LIVING RM
BOARDED FLOOR
LIVING RM
KITCHEN
HALL
BEDROOM
BEDROOM
BEDROOM
BEDROOM
BATH
BEDROOM
BEDROOM
BATH RM
HALF GROUND FLOOR
HALF FIRST FLOOR

PLAN AND ELEVATIONS OF HOUSES TYPE C.


MAJORS DOUBLE ROMAN PANTILES
MAJORS DOUBLE ROMAN PANTILES
CEILING
FIRST FLOOR
GROUND FLOOR
DOOR & CASING TO DETAIL
DAMP COURSE
FRONT ELEVATION
BACK ELEVATION
10 5 0 10 20 30 40 50
E.W. BUTT
FENCE
BLUE FACING BRICKS
REPEAT
LIVING RM
BOARDED FLOOR
SINK
BOILER
SCULLERY
QUARRY FLOOR
HALL
24' 6"
51' 7"
GROUND FLOOR
REPEAT
BEDROOM 1
BEDROOM 2
BEDROOM 3
BATH RM
FIRST FLOOR

PLANS AND ELEVATIONS OF HOUSES TYPE A.

DESIGNED BY FOLKES AND FOLKES



View from the point marked 2, on lay-out plan on page 819.

The houses are of four standard types, marked A, B, C and D on the lay-out plans. The outside walls throughout are 11 in. cavity type faced with local bricks, some in 3 in. common bricks selected for colour, and some in 2½ in. rustic facings. Where walls are covered outside with stucco they are built 9 ins. thick. Type B houses are roofed with local sand-faced tiles, and types A and C with double Roman sand-faced tiles from Bridgwater, Somerset; the latter are laid on roofing felt reinforced with wire netting. Considerable making up of ground round the houses was necessary in many instances, and cinder retaining walls were constructed with flush mortar joints.

COST

(excluding the price of land)

In the first lay-out of 100 houses (page 818), completed in 1931, the cost of the two-bedroom houses was £341 16s 9½d. each, including drains, baths and fencing, road and services.

In the second lay-out of 100 houses (page 819), built in 1932-33, the cost was as follows:

Average price per house: £312 6s. 3d.

Average superficial area per house: 761.5 sq. ft.

Average price per superficial foot: 8s. 2⅓d.

Amount of contract:
Houses, £31,231.
Roads, £2,834.
Sewers, £1,024.

LETTERS
FROM
READERS

C. F. ANNESLEY VOYSEY, F.R.I.B.A.

H. B. WHITFIELD
(General Secretary, Faculty of Architects and Surveyors)

HOWARD ROBERTSON, M.C., F.R.I.B.A.
(Chairman, Building Industries National Council)

George Walton

SIR,—May one who has known George Walton for 40 years intimately, be allowed to testify to his lovable nature. He could not say an unkind word about any man. If there were any he did not like he was silent. He was sensitive to a degree, and a beautiful colourist. His ingenuity was such that he could have made a fascinating design out of Hell Fire.

As an architect, with his chief Redfern, he made in Carlisle many public houses into public palaces. He was the most gentle of men, with strong feeling always under control.

C. F. ANNESLEY VOYSEY

Registration of Assistant Architects

SIR,—The unfortunate delay in publishing the fact that the Architects' Registration Council had put forward to the Privy Council an amendment to their original regulation (which stipulated that architectural assistants must have had a minimum period of ten years in the study and practice of the profession prior to January 1, 1932, to qualify for the register), and the further fact that the decision of the Privy Council on the proposed amendment will not be known until some months after the final date by which applications under this regulation must be submitted, have created an extraordinary situation in which numbers of assistants, who had refrained from making an application because they did not possess the qualifying period under the original regulation, are likely to lose the opportunity of securing admission to the register.

I rather gather from the letter, published in your JOURNAL, from the Association of Architects, Surveyors and Technical Assistants, that that organization anticipates (on what grounds I cannot imagine) that assistants "whose training and experience covers anything from seven to ten years up to and including December 31" may become eligible; and it further extends a cordial invitation to *all* assistants to make an application.

My correspondence reveals the fact that many architectural assistants are now completely bewildered as to what the minimum qualifying period is (or is likely to be), and, unless the proposed regulation is stated in exact and unequivocal terms so that all architectural assistants are given a fair opportunity of making application if they are qualified under that regulation, many anomalies and a great deal of heart-burning are going to ensue. The only safe advice to the assistant is, "If in doubt, make an application—and hope for the best!"

H. B. WHITFIELD

The Painter and Decorator

SIR,—The winter months bring hard times to many engaged in the building and allied trades, for employment then is at its lowest ebb. But for no class of worker in this industry are things so bad as for the painter and decorator. The Labour Ministry's statistics show that in his case employment sinks to a far lower pit of depression than that of other workers in the industry. Thus, in January, 1933, while the unemployment figure for the building industry as a whole was 37·7 per cent., that for the painter and decorator was no less than 51·1 per cent.—one man out of every two unemployed. With slight variation similar conditions hold throughout the winter months.

This is really uneconomical, and to a large extent unnecessary. Grounds for the old prejudice against painting and decorating in the winter no longer exist. Modern methods and appliances ensure as satisfactory results in winter as in summer. If owners of property and householders would realize this and see to it that all necessary interior work of painting and maintenance were put in hand at this time, they would actually save money, for prices of internal work generally are lower during the winter months.

Local government authorities, large corporations, such as banks, industrial and commercial firms and property owners could all help to reduce this unnecessary unemployment if they placed orders for work now and early in the New Year instead of during the rush, and more costly, period from March to July.

It must be borne in mind, too, that painting and decorating work stimulates employment among joiners and other building workers, as well as in the soft furnishing trades, all of which helps materially to maintain the national volume of trade upon which employment of all kinds finally depends.

HOWARD ROBERTSON

Flats

Mr. T. P. Bennett, F.R.I.B.A., in a paper read at the Northern Polytechnic on December 15, dealt with flats which were designed to be self-supporting and would show a reasonable return upon capital expenditure.

The most important matter of primary consideration, he said, is the type of person who is intended to live in the flats and the rent group into which the flats are to fall. This necessitates studying the conditions of living of people of various social grades and endeavouring to visualize as clearly as possible their precise requirements, the most desirable arrangement of their rooms, their approaches, and details of the planning.

The type of block having been laid down, the method of approach needs consideration. In smaller types of flats, if lifts are used, it is essential that one staircase should lead to a group of 5, 6 or more flats per floor in order that the lift and the services, as well as the arrangements for porterage, in the flats should be on an economical basis.

In larger and more exclusive types of flats it is desirable or necessary to limit the flats per floor per entrance to two or three, thus obtaining compact entrance halls and an economical arrangement of the flat plan itself.

The necessity for dealing with porterage in a block of flats where liveried servants are an asset, leads to the consideration of central entrance halls from which 2, 3, 4, 5 or even 6 staircases, and lifts, can be approached, thus providing efficient porterage service capable of being maintained by a limited number of porters.

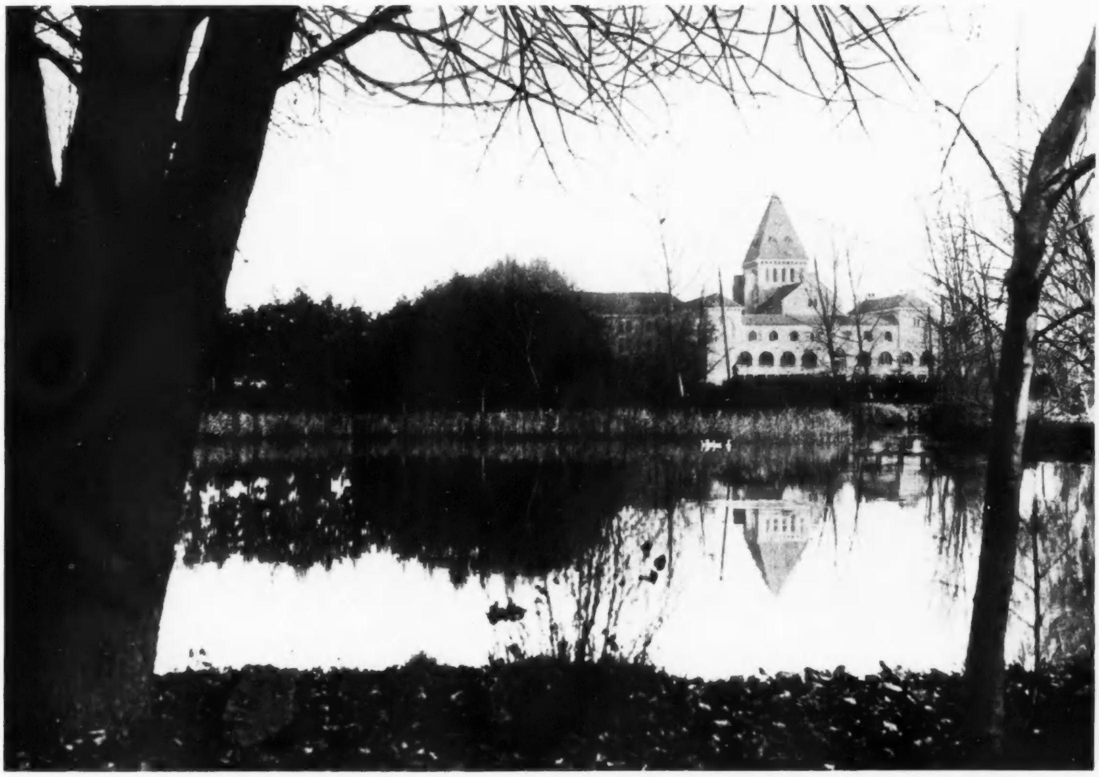
The next consideration is that of service entrances and exits, the efficient design of which is the *sine qua non* of a flat block.

The easiest and least attractive method is to allow access to the main corridors so that tradesmen deliver goods to the persons in the flats.

To provide for flat dwellers who are absent throughout the day, delivery hatches are provided and dustbin hatches.

If garage or shop has to be provided on the ground floor, 1st floor, or basement to the whole building, the service approaches become extremely difficult, and a large number of alternatives may have to be considered, even to the extent of taking tradesmen to the roof and delivering goods downwards through a series of lifts.

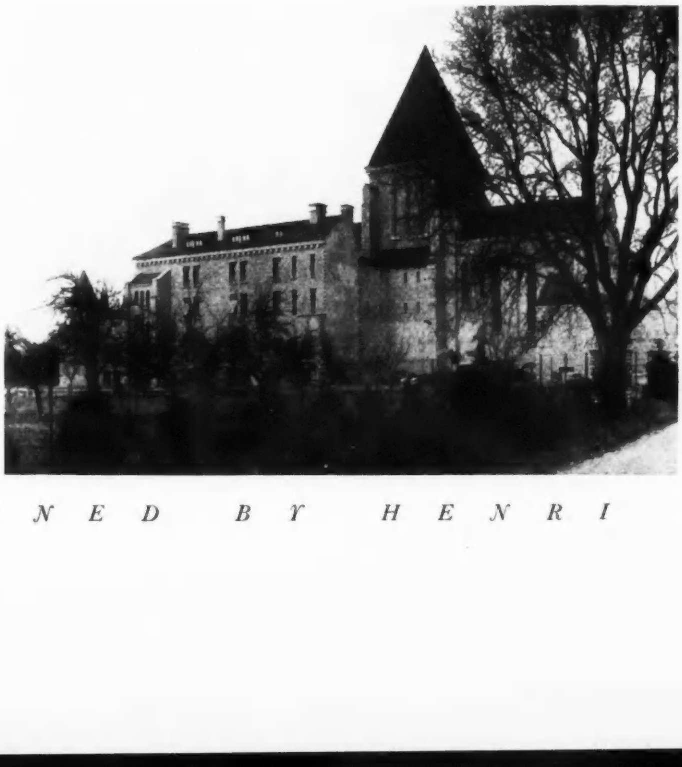
MONASTERY AT SENS



The new Monastery of the Nativity has been built in an eastern suburb of Sens, not far from Paris, for the Dominican order.

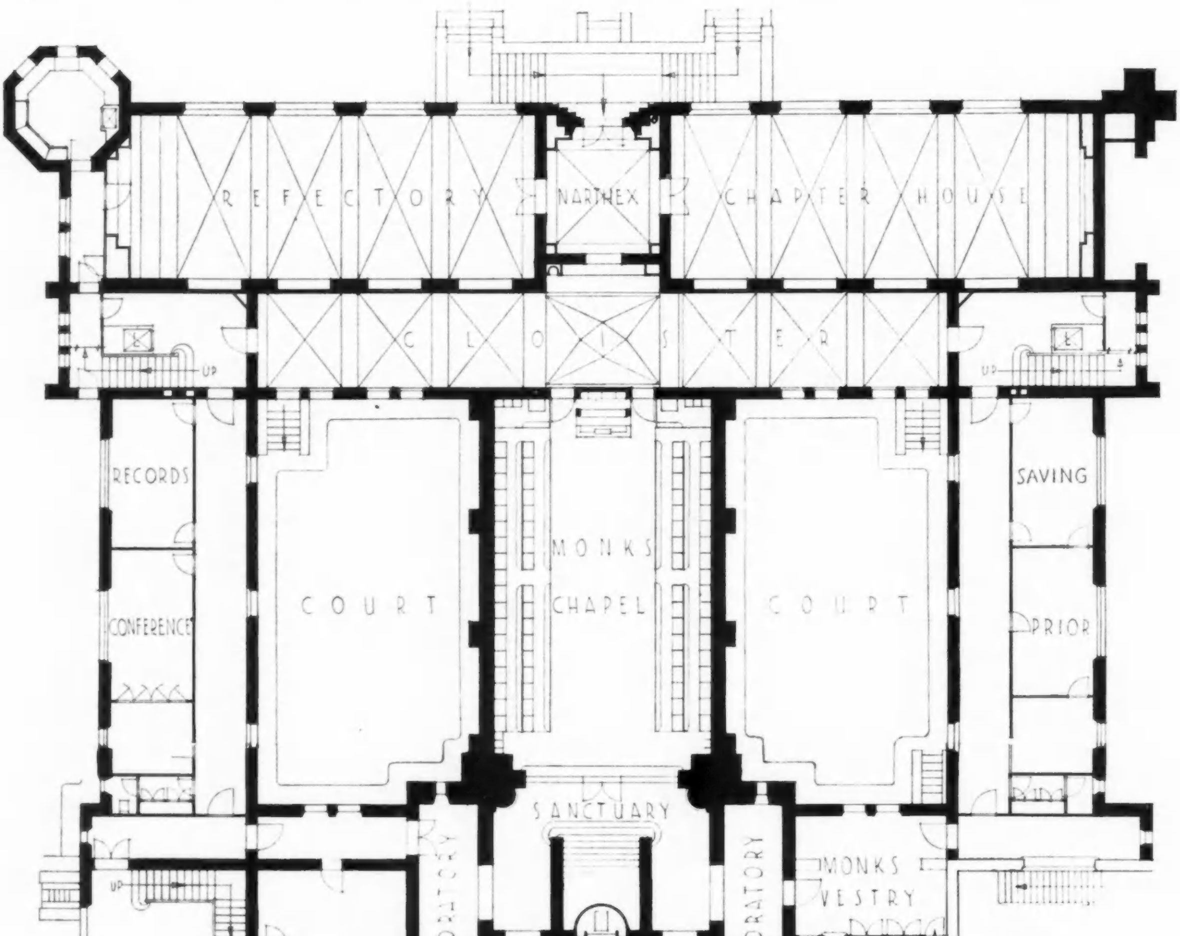
The walls are of yellow rubble from Chassignelles, with a rubble facing from Lezonnis. All salient parts, where greater weather resistance is needed, are in yellow Vaurian rock. The sculptures are of Pouillenay stone. The roof is covered with flat brown Burgundy tiles, which have been given different tones by special baking.

The illustrations show: above, a general view on the side of the Great Terrace, which runs along the roof of the Refectory and Chapter House; below, a view from the side, looking into the court before the Hospital wing was completed (see plans on pages following).

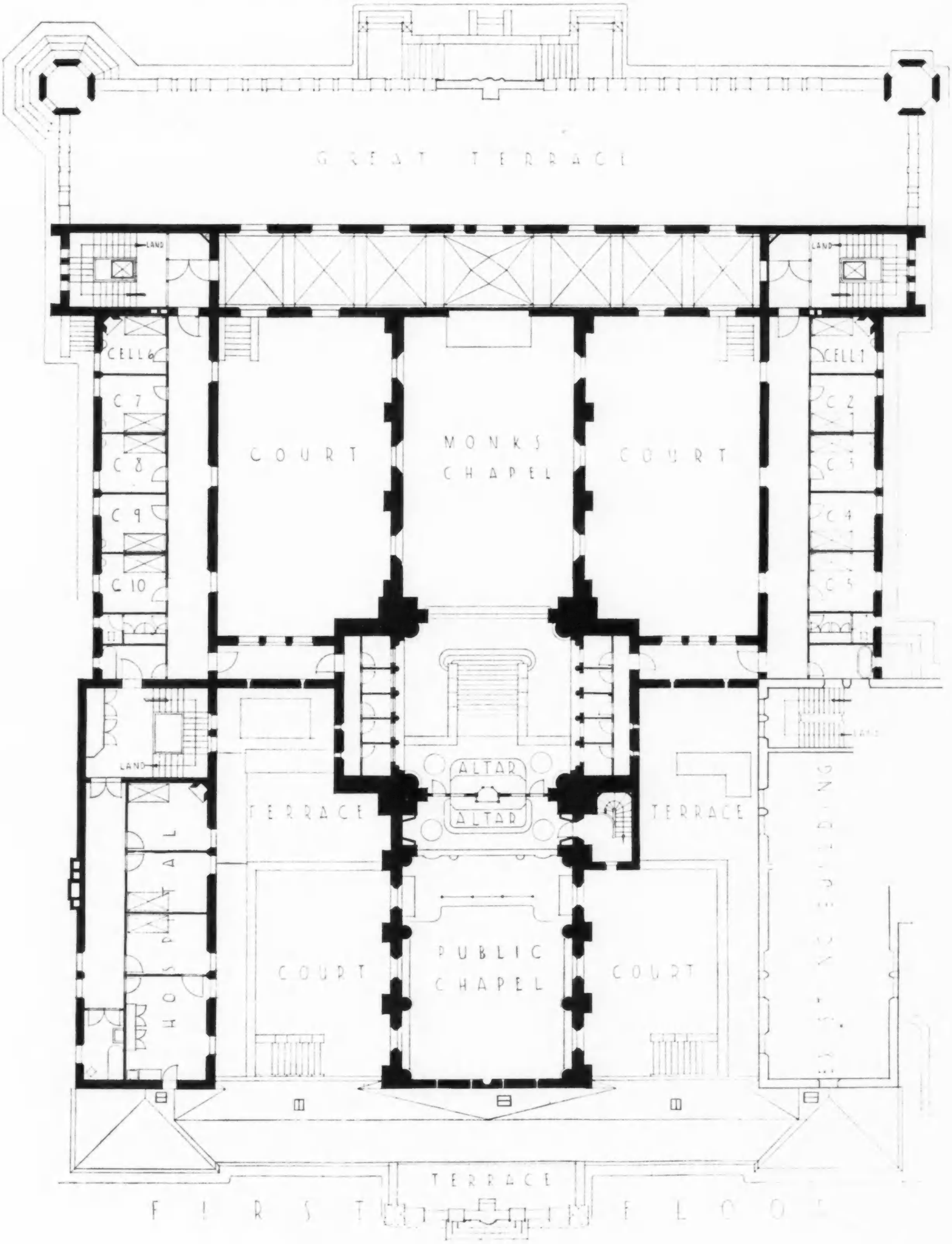


DESIGNED BY HENRI VIDAL

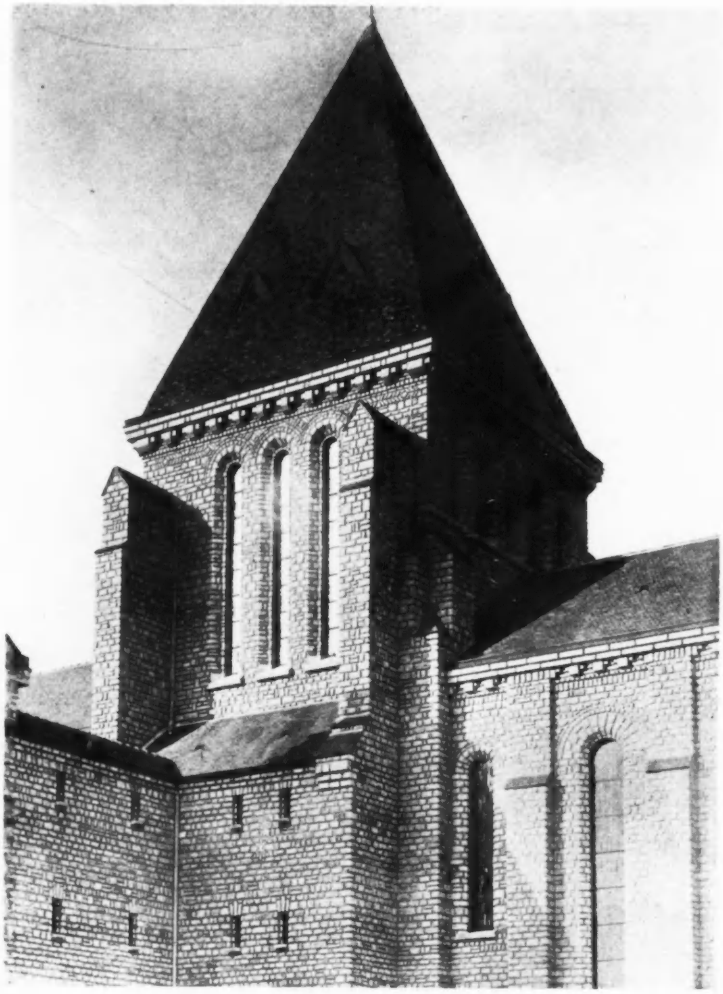
MONASTERY AT SENS, NEAR PARIS:

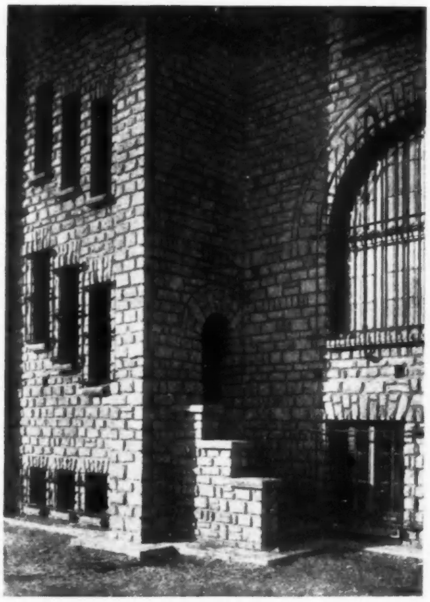

REFECTORY
NARTHEX
CHAPTER HOUSE
CLOISTER
UP
UP
RECORDS
SAVING
CONFERENCE
COURT
MONKS CHAPEL
COURT
PRIOR
SANCTUARY
UP
ORATORY
ORATORY
MONKS VESTRY
PRELATE
UP
VESTRY
PARLOUR 5
P4
P3
P2
SANCTUARY
COURT
PUBLIC CHAPEL
COURT
EXISTING BUILDING
P1
LOBBY
PORTER
PORTER
GROUND FLOOR
10 5 0 10 20 30 40 50 60 70 FEET

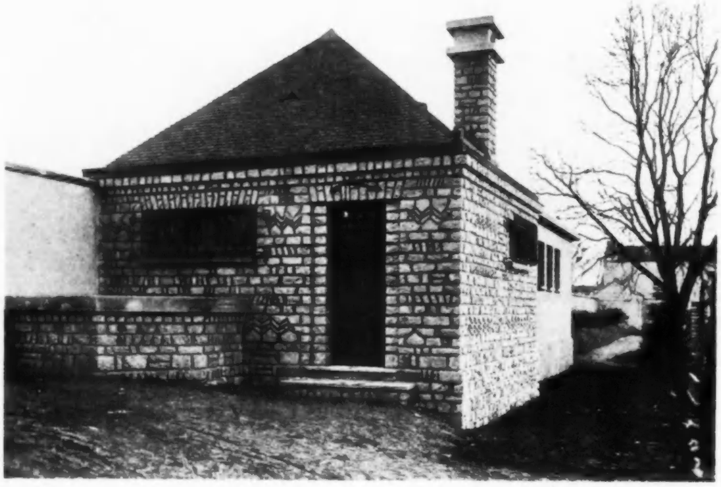
DESIGNED BY HENRI VIDAL


GREAT TERRACE
LAND
LAND
CELL 6
C 7
C 8
C 9
C 10
COURT
MONKS CHAPEL
COURT
CELL 1
C 2
C 3
C 4
C 5
LAND
LAND
ALTAR
ALTAR
TERRACE
TERRACE
HOSPITAL
COURT
PUBLIC CHAPEL
COURT
EXISTING BUILDING
TERRACE
FIRST FLOOR

MONASTERY AT SENS, NEAR PARIS:





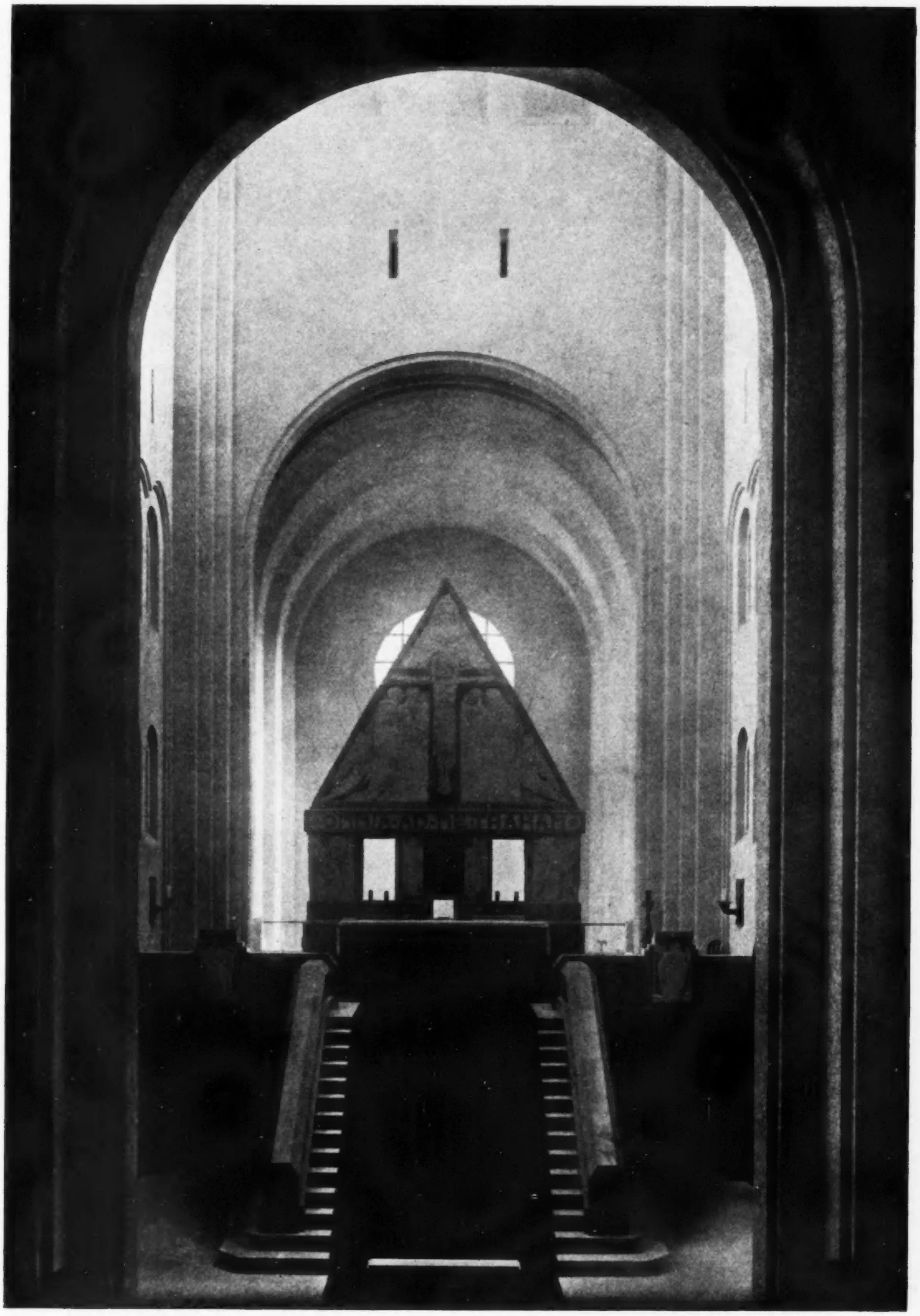


The ground on which the building stands is of a very marshy nature, and special precautions had to be taken against damp. The heating chamber, for instance, is below water level, and had to be lined with a layer of asphalt and an inner wall of waterproofed reinforced concrete. A cap of the same waterproofed concrete has also been placed over the top of the foundation walls to prevent water rising through capillary action.

Woodwork outside and inside, including the roof framing, is of quartered oak, seasoned and waxed.

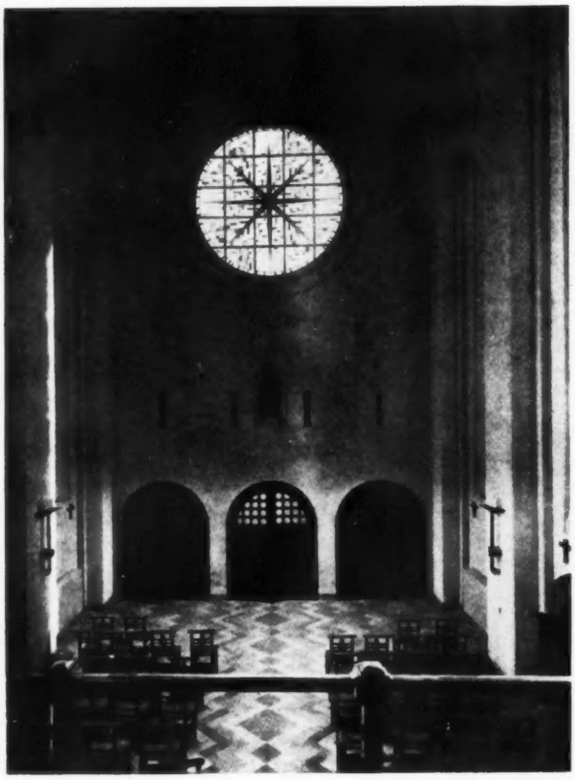
The photographs on this page show the central tower over the crossing in the chapel, a side door, leading to the staircase at the end of the cloister, and the concierge's lodge in the grounds.

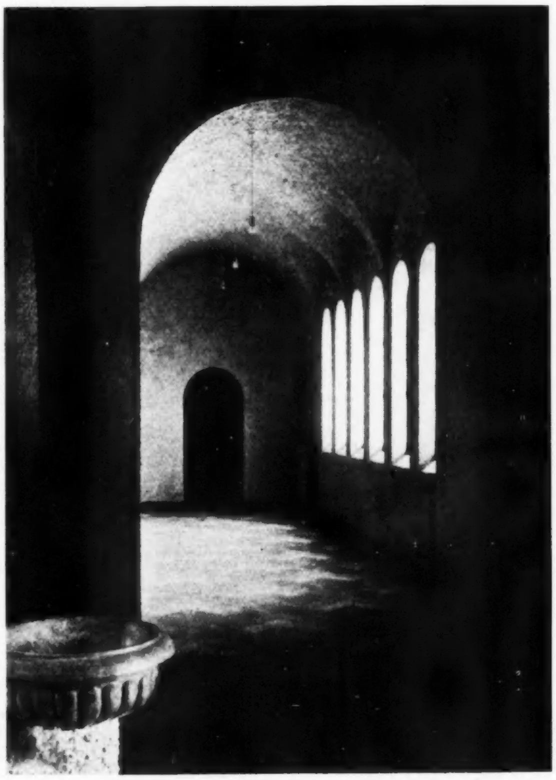
DESIGNED BY HENRI VIDAL



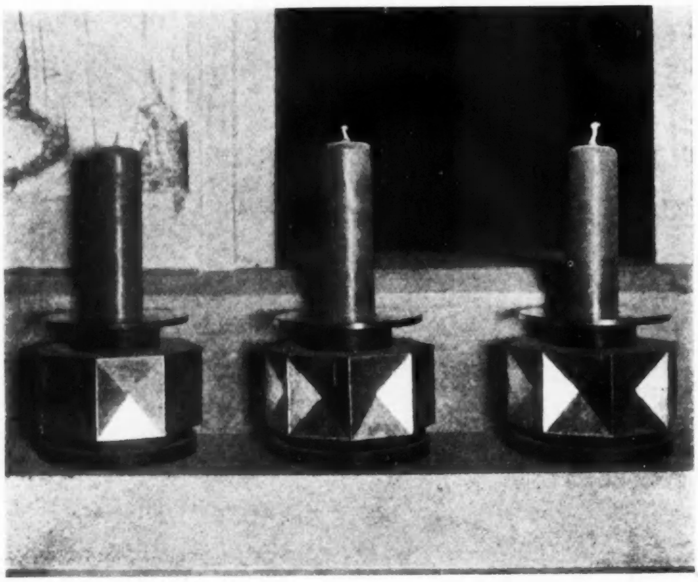
Looking towards the high altar from the Monk's Chapel. The Public Chapel is beyond, with its own altar backing on to the one seen in the photograph.

MONASTERY AT SENS, NEAR PARIS





Above: (left) the Public Chapel looking away from the altar; (right) the Cloister giving access to the Public Chapel. Below: some metal candlesticks for use on the high altar.



DESIGNED BY HENRI VIDAL

LAW REPORT

SUB-CONTRACTOR : QUESTION OF LIABILITY

Trollope and Colls, Ltd. v. Rosser and Russell, Ltd.—Court of Appeal. Before the Master of the Rolls and Lords Justices Lawrence and Romer.

THIS was an appeal by the plaintiffs, Trollope and Colls, Ltd., building contractors, of Coleman Street, E.C., from a judgment of the Lord Chief Justice, sitting in the King's Bench Division, in favour of the defendants, Rosser and Russell, heating engineers, of Queen Street, Hammersmith.

In the Court below the plaintiffs sued the defendants to recover the sum of £567 for alleged negligence by them, who, as sub-contractors, installed a hot water heating system in premises erected by the plaintiffs in Old Jewry, E.C., for the Bank of Australia.

The defendants denied negligence, and alternatively pleaded contributory negligence on the part of plaintiffs' workmen.

The plaintiffs also relied on an indemnity clause in the sub-contract which ran as follows :—

" The sub-contractor shall ensure against all claims, of whatever nature, to be brought against him, and shall indemnify the contractors against all such claims brought against the contractors in respect of injury or damage to any property or things of the contractors, caused by or existing out of the execution of the sub-contract work."

Plaintiffs engaged the defendants to instal a heating system, consisting of radiators, throughout the bank premises, and in June required them to remove a number of radiators temporarily to allow of the laying down of wooden floors in certain rooms. During the night of June 23 flooding occurred and damage was done to the wood flooring on several floors and plaster work, and the flooding spread to an adjoining building. It appeared that the defendants, instead of fitting locked stopper cocks to the radiator pipes, fitted wheel valves. The former could not have been opened without a spanner. Another allegation was that the defendants did not empty the main feed tank.

Defendants replied that the system was left emptied when their workmen left work for the day, and that the valves were opened afterwards by plumbers employed by the plaintiffs without notice to the defendants.

The Lord Chief Justice held that there was no satisfactory evidence of what was the cause of the damage or injury complained of and gave judgment for the defendants with costs.

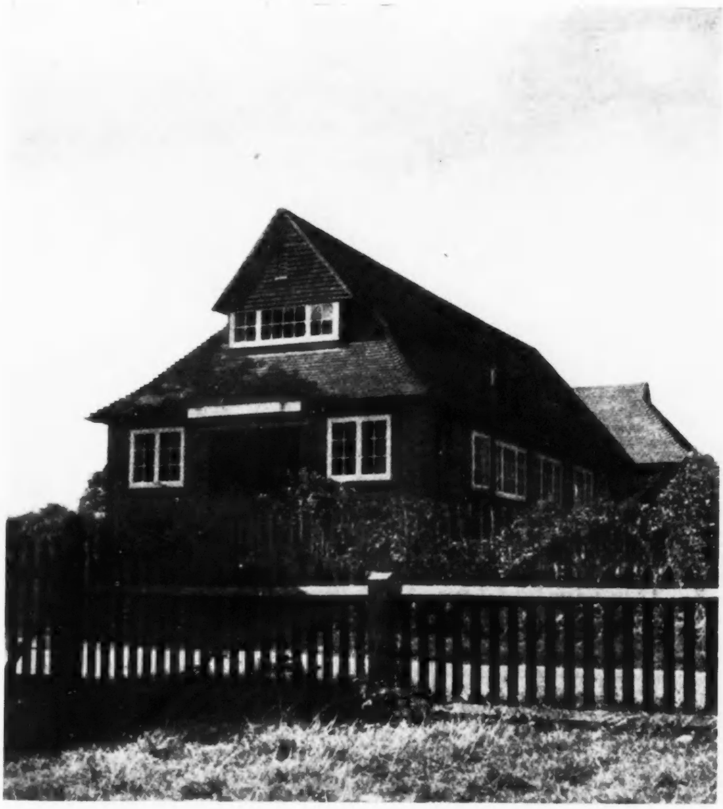
Plaintiffs now appealed.

The Court, after hearing Mr. Samuels, K.C., for the appellants, and without calling upon counsel for the respondents, dismissed the appeal with costs.

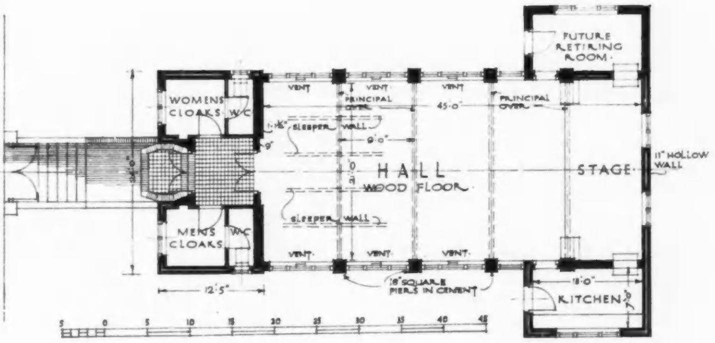
The Master of the Rolls, in giving judgment, said nobody knew how the damage was caused, so it could not be said to arise from the sub-contractors' work. There was no evidence of neglect on the part of the sub-contractors.

The Lords Justices concurred.

VILLAGE HALL, UNDERRIVER



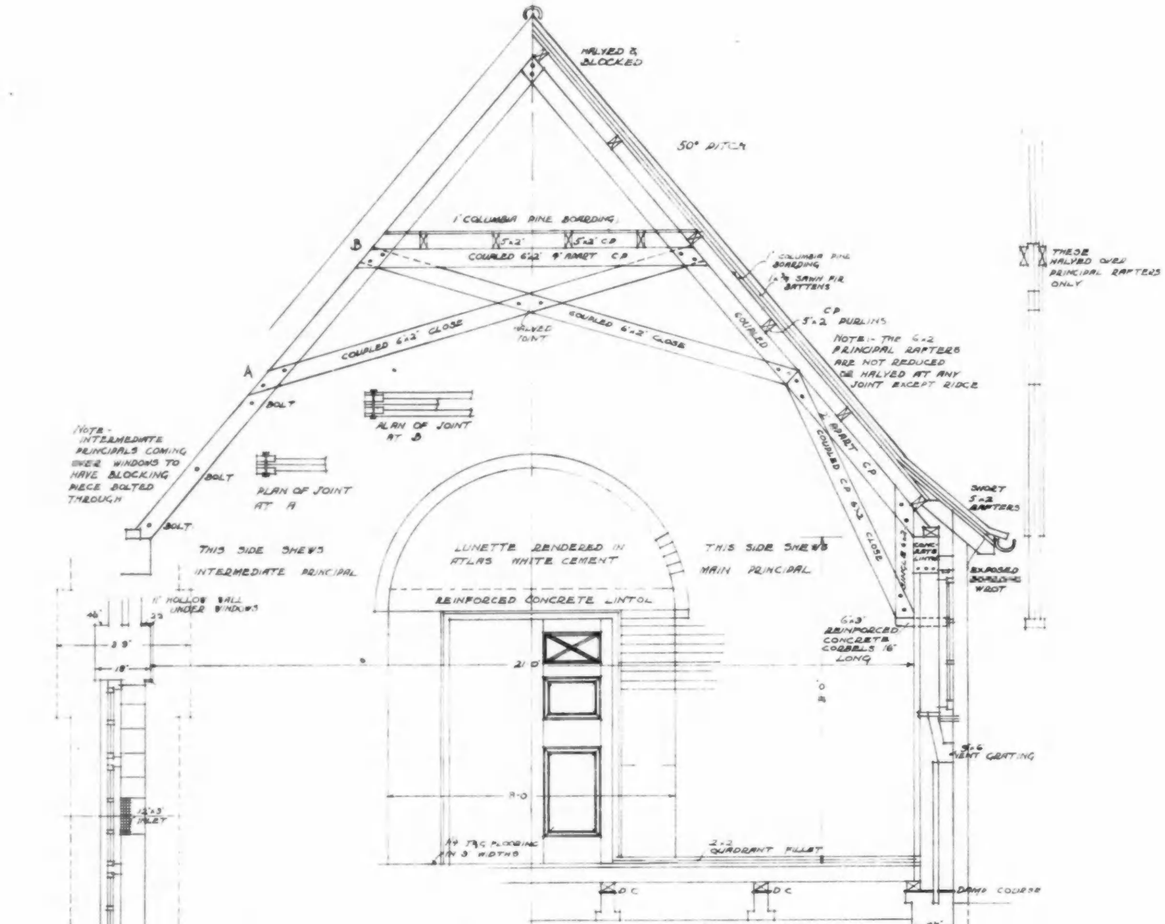
This hall has been built in a small village in Kent in which there was no meeting place for the inhabitants. The walls are faced with local bricks and the roofs are covered with Kentish tiles. The cost of the building was £1,381.



GROUND PLAN

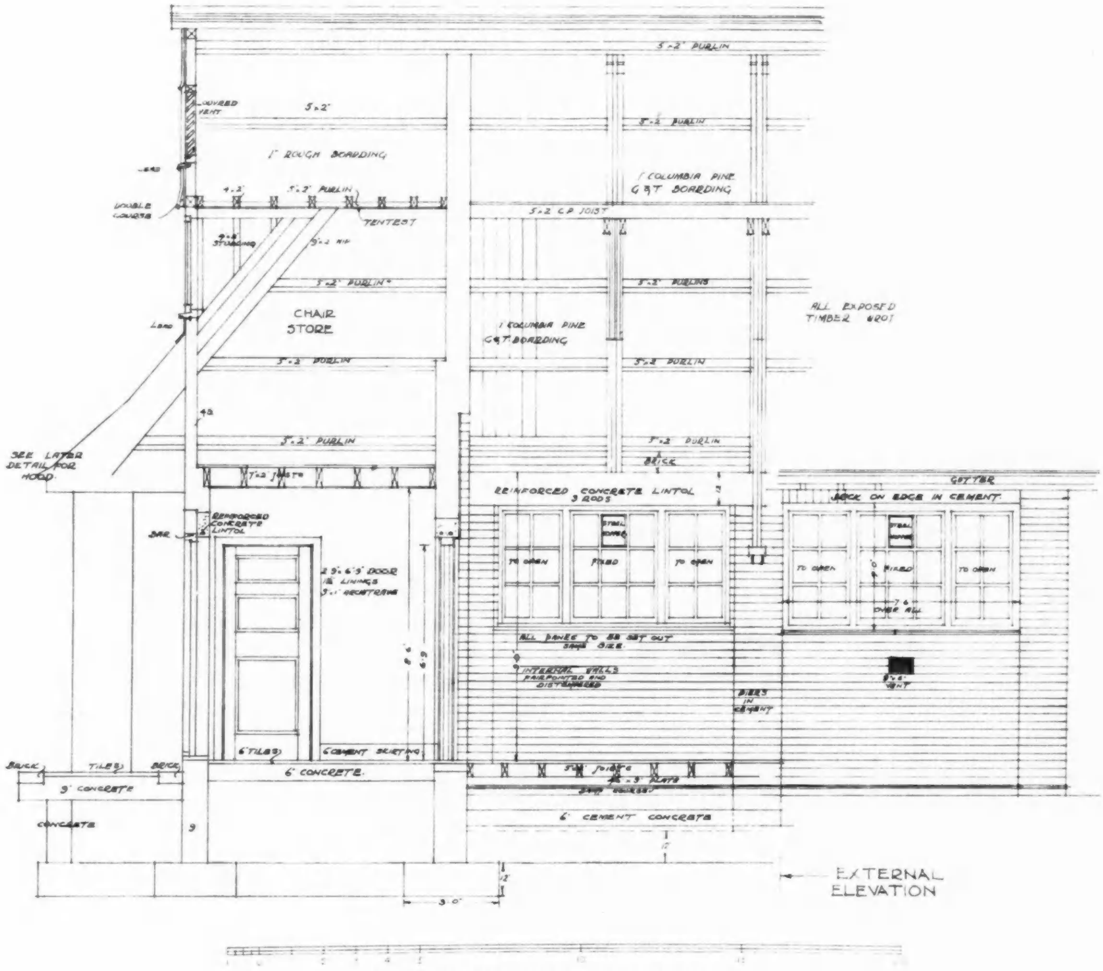
DESIGNED BY W. H. ANSELL

VILLAGE HALL, UNDERRIVER,

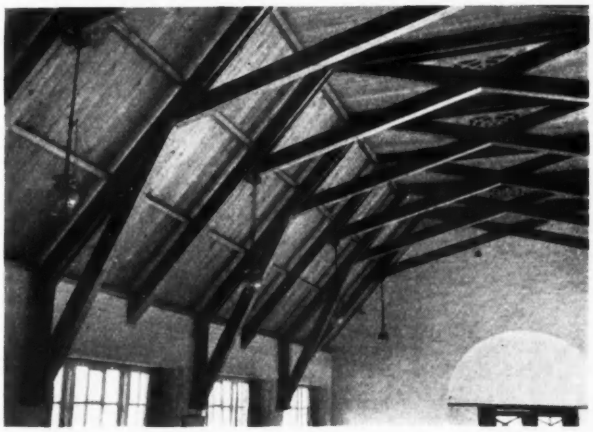

HALVED & BLOCKED
50° PITCH
1" COLUMBIA PINE BOARDING
B
5×2"
5×2" CP
COUPLED 6×2" 9' APART CP
1" COLUMBIA PINE BOARDING
1×¾ SAWN FIR BATTENS
CP 5×2 PURLINS
NOTE:- THE 6×2 PRINCIPAL RAFTERS ARE NOT REDUCED OR HALVED AT ANY JOINT EXCEPT RIDGE
THESE HALVED OVER PRINCIPAL RAFTERS ONLY
COUPLED 6×2" CLOSE
HALVED JOINT
COUPLED 6×2" CLOSE
COUPLED
A
BOLT
PLAN OF JOINT AT B
NOTE - INTERMEDIATE PRINCIPALS COMING OVER WINDOWS TO HAVE BLOCKING PIECE BOLTED THROUGH
BOLT
PLAN OF JOINT AT A
BOLT
APART CP
COUPLED CP 6×3 CLOSE
SHORT 5×2 RAFTERS
THIS SIDE SHEWS INTERMEDIATE PRINCIPAL
LUNETTE RENDERED IN ATLAS WHITE CEMENT
THIS SIDE SHEWS MAIN PRINCIPAL
CONC. LINTOL
EXPOSED BOARDING WROT
REINFORCED CONCRETE LINTOL
11" HOLLOW WALL UNDER WINDOWS
4½"
2½
3 9"
18"
21' 0"
6×3" REINFORCED CONCRETE CORBELS 16" LONG
12"×3" INLET
8-0
9×6 VENT GRATING
1¼ T&G FLOORING IN 3" WIDTHS
2×2 QUADRANT FILLET
D C
D C
DAMP COURSE
6" CEMENT CONCRETE
13½"
CEMENT CONCRETE
3 0
LINE OF ARCH OVER SMALL BULLNOSE BRICK
2 COURSE VERTICAL SLATE D.C.
¾ CEMENT SKIRTING 6" HIGH
2" DOORS 4'6 × 6'9"
SWING DOORS
4½×3 FRAME
CEMENT FLOOR
6 RED QUARRIES (SMOOTH FACE)
ENTRANCE
4 3
CEMENT SKIRTING
LOBBY
2 6 × 6'9 DOOR CENTRES
3 6 PROJECTION
2 9 × 6'9" DOOR
12 5
WOMENS CLOAKS
CEMENT FLOOR
CEMENT SKIRTING
8 0
7 0
9"×9" QUARRIES
4 3
BRICK ON EDGE
24' 0"
8-6½
6-11"
8-6½
5
10
15
20

CROSS SECTION AND PART PLAN

KENT: DESIGNED BY W. H. ANSELL


5 × 2" PURLIN
LOUVRED VENT
5 × 2"
1" ROUGH BOARDING
LEAD
DOUBLE COURSE
4 × 2"
5 × 2" PURLIN
TENTEST
4 × 2" STUDDING
5 × 2 HIP
5 × 2" PURLIN
CHAIR STORE
LEAD
3 × 2 PURLIN
4½
5 × 2" PURLIN
SEE LATER DETAIL FOR HOOD
7 × 2 JOISTS
REINFORCED CONCRETE LINTOL
BAR
2' 9" × 6' 9" DOOR 1½ LININGS 3 × 1 ARCHITRAVE
6' 6"
6' 9"
6" TILES
6" CEMENT SKIRTING
BRICK
TILES
BRICK
9" CONCRETE
CONCRETE
9
6" CONCRETE
3' 0"
5 × 2" PURLIN
1" COLUMBIA PINE G & T BOARDING
5 × 2 C.P. JOIST
5 × 2" PURLINS
1" COLUMBIA PINE G & T BOARDING
ALL EXPOSED TIMBER WROT
5 × 2 PURLIN
5 × 2 PURLIN
BRICK
REINFORCED CONCRETE LINTOL 3 RODS
STEEL
TO OPEN
FIXED
TO OPEN
ALL PANES TO BE SET OUT SAME SIZE
INTERNAL WALLS FAIRPOINTED AND DISTEMPERED
PIERS IN CEMENT
GUTTER
BRICK ON EDGE IN CEMENT
TO OPEN
FIXED
TO OPEN
7' 6" OVER ALL
VENT
JOISTS
PLATE
DAMP COURSE
6" CEMENT CONCRETE
EXTERNAL ELEVATION

LONGITUDINAL SECTION



Above: longitudinal section through the Hall. Right: an interior photograph showing the roof, which is constructed entirely of 6 in. by 2 in. timbers, bolted together. On facing page: cross section looking towards the entrance and detail plan of entrance portion.

Inveraray and Loch Fyne, Argyllshire. [*From* THE FACE OF SCOTLAND.]

LITERATURE

SCOTLAND

[*By James MacQuedy*]

The Face of Scotland. By Harry Batsford and Charles Fry. London: B. T. Batsford, Ltd. Price 7s. 6d. net.

WE are all familiar with the usual book about Scotland ; and most of us are tired of it. It is apt to suffer from a perverted historical enthusiasm—what might be labelled a Stuart-fixation—embodying endless anecdotes about Bonnie Prince Charlie or the Border feuds, and relegating local topography to a kind of scenic background to romantic adventure ; or else it suffers from a similar literary preoccupation, chiefly derived from Burns and the Waverley Romances. With the last is often combined the most trying of all the moods that overtake the impetuous searcher after romance, that of Celtic rhapsody. Here the poor peasant (whose very poverty is turned into the virtue of asceticism) lives in a perpetual mystic gloom, scratching a meagre living from the reluctant soil and his intellectual sustenance from a legendary past." Place names in the Highlands are given in the Gaelic and translated in brackets into English, with an exclamation of childish wonder when it is found that these primitive people have named a red-topped mountain "the peak of the red rocks."

The Face of Scotland happily falls into none of these categories. It has a gaily coloured cover that may at first glance look suspiciously like the usual garment of Caledonian romanticism ; but on closer examination the absence of Highland Cattle provides immediate relief, and after a glance inside the book all fears are dispelled.

The authors have taken the very sensible course of presenting their subject objectively. Scotland is simply *described*, with restraint but with obvious knowledge. The book, in fact, remains true to its title, though not too literally so ; for the superficial aspect of the country is wisely related wherever possible to its geological formation. The necessity for literary passages to enlarge exhaustively on the visual effect of natural features has been avoided by providing a magnificent series of photographic plates, over a hundred in number, which reach a very high standard both in pictorial quality and in effectiveness as illustrations to the text. Several cloud landscapes deserve particular mention, whose piled up height of wind-swept cumulus must be the envy of any Sassenach.

The book is divided into three parts : the first called *Highlands and Islands*, the second *Lowlands and Uplands*, and the last *A Note on Scottish Buildings*. This chapter, though brief, is a useful summary of the influences that shaped Scotland's architectural history.

The Scots, like the Irish, are not naturally a gregarious people, and when they congregate into cities they have no national forms in which to express their urban existence. Edinburgh, like Dublin, is architecturally an extension of the English renaissance ; though, also like Dublin, it has suffered less than most English cities from the disintegrating effects of nineteenth-century eclecticism. Ecclesiastical architecture (except for some early Pictish survivals) is also an importation, though here the French influence often supplants the English.

The Scottish Baronial style, entirely native though it is, has been so subjected to ridicule by later parodies that even such fine and genuine examples as Glamis and Traquair are hard to dissociate in one's mind from the "bogus" atmosphere a sight their familiar turrets and battlements at once engenders ; and we are left with the fishing settlement and the small crofting township as the truly vernacular Scottish product. In these the severe whitewashed forms and the crow-stepped gables in hard grey stone are honestly representative of a practical hard-working country, where life is lived too close to the soil to leave any room for southern sophistication.

TWO THOUSAND YEARS OF LONDON

Two Thousand Years of London. By C. Whitaker-Wilson. London: Methuen and Co., Ltd. Price 12s. 6d. net.

THIS book is full of information, a great deal of which must have entailed much labour in selection and collation; but it is precluded from achieving any kind of completeness or from giving satisfaction as a self-sufficient story by the limitations which the author has set himself.

It is at the same time a textbook of English history with the purely arbitrary limitation of confining its points of emphasis to occurrences in London, and a history of London with the equally arbitrary limitation of examining only those causes of London's growth that happened to have constitutional and personal rather than proletarian importance.

The author in his preface says: "In the story I have paid as much regard to the people as to the place (more, if anything) because I have thought the place rather dull without the people." That is a commendable attitude, all too rare in guide-books; though a place without people is not only dull, but meaningless. The next sentence is less fortunate: "Finding my people in early times to be kings, queens, princes, and others of rank, I have followed the activities of such personages throughout my narrative, but I have not forgotten statesmen, poets, painters, dramatists, and men-of-letters generally." It is not these that give its character to a city. The perpetual undercurrent of every-day habit that changes gradually and impersonally from one century to another may be of little use to the historian of events and personalities; but to ignore it is to ignore the real force that shapes a city's growth—the shared life which is the reason for its existence.

Architecturally, the book makes no claim to present a consecutive story. Buildings are brought in as a background to the historical scene, whenever the scene is of sufficient moment to merit detailed description. By this method many important landmarks in London's growth are inevitably omitted; the most remarkable example being in the chapter on the Georgian period (from 1714 to 1837), architecturally probably the most important in English history, where no reference is made to the huge planning enterprises then

Culross, Fife: Old Houses and Toll Booth.

Crail Harbour on the Fife Coast.

Classical Edinburgh: Waterloo Place.

[*From* THE FACE OF SCOTLAND.]

undertaken, and the name of Nash has but a single mention—as the designer of Buckingham Palace. Nor is the later development of the great private estates—Ladbroke, Portman and Grosvenor—credited with its influence on London's urban character.

Nevertheless, there are many interesting sidelights on the circumstances that surrounded the inception of London's architectural monuments, and the author is always appreciative of the peculiar characteristics of the London background that differentiate London from other great cities.

J. M. R.

Publications Received

Ausstattungskunst im Gotteshause. Edited by P. Gregor Hexges. Berlin : Bauwelt.

Winchester College. By C. Hawkes. London : Country Life. Price 10s. 6d. net.

1931 Form of Building Contract. By W. T. Creswell. Assisted by Armstrong Cowan. London : Pitman. Price 7s. 6d. net.

Bonding of Brickwork. By William Frost. Cambridge : University Press. Price 4s. 6d. net.

Modern English Punctuation. By Reginald Skelton. London : Pitman. Price 2s. 6d. net.

Modern Steelwork. British Steelwork Association. Price 5s. net.

Swakeleys, Ickenham. By W. Godfrey. F.R.I.B.A. London Survey Committee. Price 25s. net.

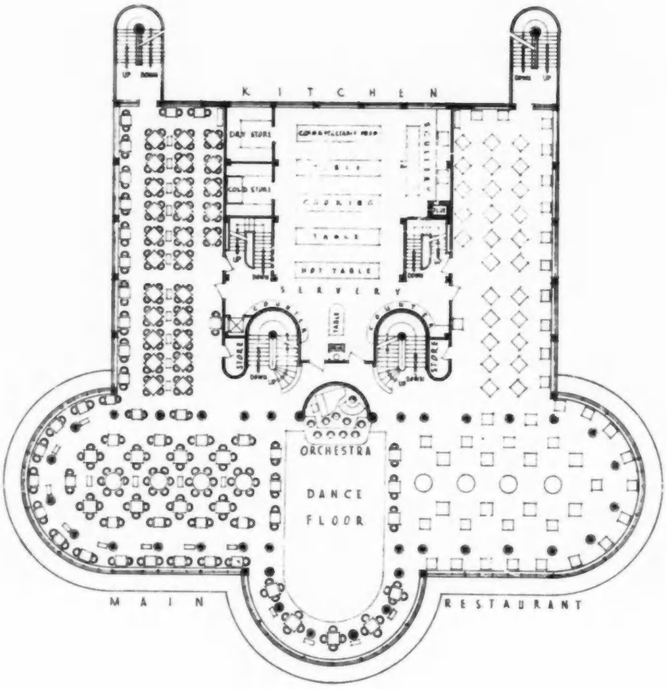
Town and Regional Development. By H. Chapman. London : Dent. Price 10s. 6d. net.

Lectures on Electric Lighting

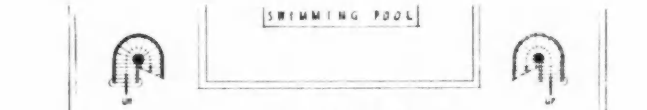
The following conferences have been arranged by the Joint Lighting Committee of the Architectural Profession and the E.L.M.A. Lighting Bureau, to be held at the Lighting Service Bureau, 2, Savoy Hill, W.C.2, in January, February and March, 1934 :—

January 17 : "Lighting Principles and Economics," by W. J. Jones, M.SC. Discussion to be opened by C. H. James, F.R.I.B.A. January 31 : "Church Lighting," by H. C. Wheat. Discussion to be opened by E. B. Maufe, F.R.I.B.A. February 14 : "Lighting for Shops and Stores," by R. O. Ackerley. Discussion to be opened by Maurice E. Webb. F.R.I.B.A. February 28 : "Industrial Lighting," by H. A. Lingard. Discussion to be opened by C. Lovett Gill, F.R.I.B.A. March 14 : "Lighting in Interior Decoration," by R. O. Sutherland, A.R.I.B.A. Discussion to be opened by G. Grey Wornum, F.R.I.B.A. March 28 : Designing Facilities for Installing Light," by F. G. Quance. Discussion to be opened by L. H. Bucknell. A.R.I.B.A.

DESIGN FOR A ROAD

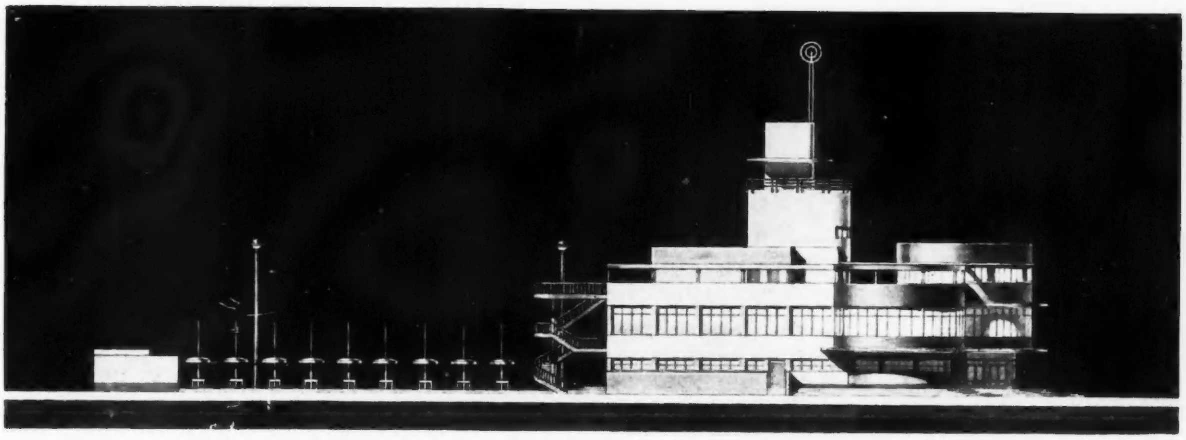

KITCHEN
DRY STORE
COLD STORE
COOKING
TABLE
HOT TABLE
SCULLERY
SERVERY
STORE
STORE
TABLE
ORCHESTRA
DANCE FLOOR
MAIN
RESTAURANT

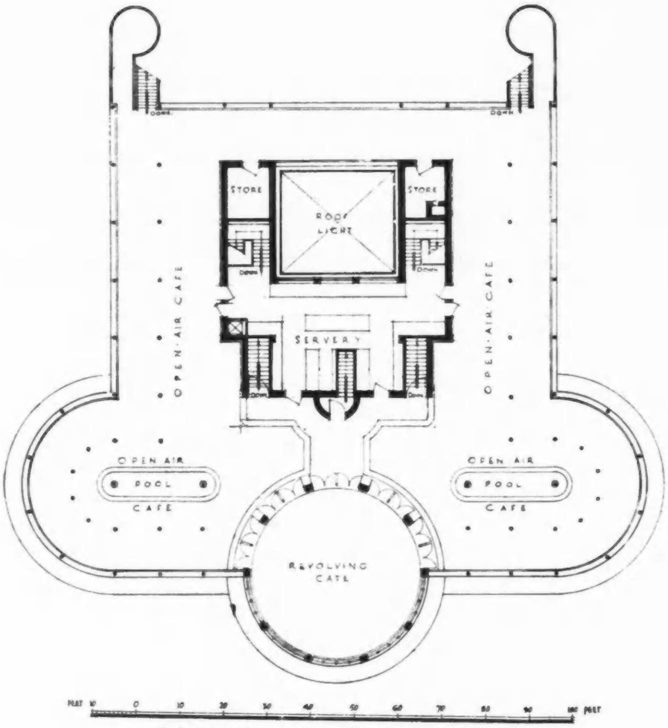
FIRST FLOOR PLAN


SWIMMING POOL
SERVICE YARD
FEMALE STAFF
MALE STAFF
COFFEE LOUNGE
MANAGER'S OFFICE
HEATING CHAMBER
SERVICE YARD
DRY STORE
FUEL
LINEN
SILVER
STORE
SERVICE
STORE
GENTS
GENTS CLOAKS COUNTER
LADIES CLOAKS COUNTER
LADIES
COFFEE LOUNGE
ENTRANCE HALL
SALE OF CIGARETTES, TOBACCO & CONFECTIONERY
SALE OF FANCY GOODS
COCKTAIL BAR
CLEANERS
CLEANERS
N
W
E
S
FEET 10 0 10 20 30 40 50 60 70 80 90 100 FEET
ELEVATION TO ROADWAY

GROUND FLOOR PLAN

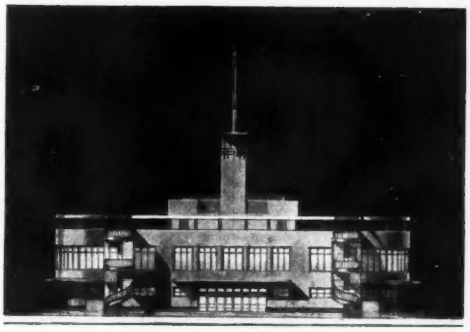
HOUSE: BY THE LATE CHESTER JONES




STORE
ROOF LIGHT
STORE
DOWN
DOWN
DOWN
DOWN
OPEN-AIR CAFE
OPEN-AIR CAFE
SERVERY
OPEN AIR
POOL
CAFE
OPEN AIR
POOL
CAFE
REVOLVING CAFE
FEET 10 0 10 20 30 40 50 60 70 80 90 100 FEET

ELEVATION TO ROADWAY

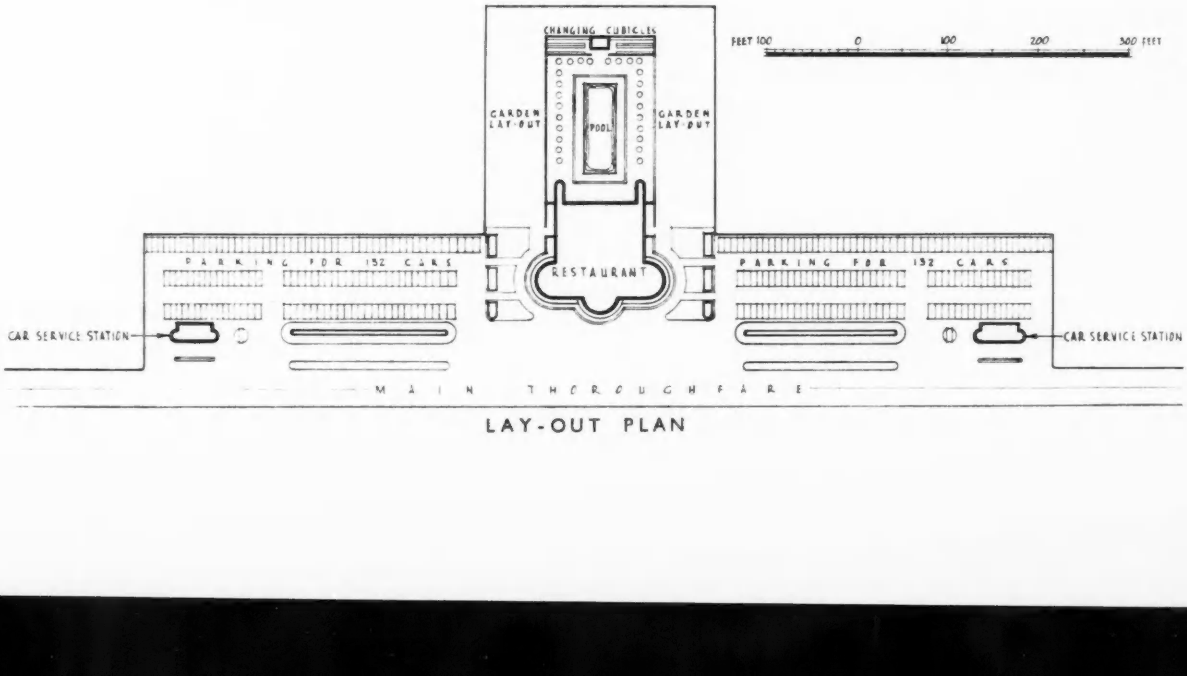
ROOF PLAN



This scheme was prepared for a site on one of the main motor roads south of London. In the lay-out (see plan below) large car-parking accommodation was provided, with a small filling-station for visitors and the passing public. The swimming pool was surrounded by tables for the serving of refreshments and by gardens.

On the roof was a slowly revolving café, to provide a continually changing view for those inside. The tower was to be illuminated with neon lighting.

The building was designed for a combination of steel frame and reinforced concrete construction, the exterior to be finished in white.


CHANGING CUBICLES
GARDEN LAY-OUT
POOL
GARDEN LAY-OUT
RESTAURANT
PARKING FOR 152 CARS
PARKING FOR 152 CARS
CAR SERVICE STATION
CAR SERVICE STATION
MAIN THOROUGHFARE
FEET 100 0 100 200 300 FEET

LAY-OUT PLAN

SOCIETIES AND INSTITUTIONS

INSTITUTION OF STRUCTURAL ENGINEERS

Following are some extracts from a paper on "The Application of High Grade Steel to Reinforced Concrete," read by Dr. Fritz Emperger, at a recent meeting of the Institution of Structural Engineers.

It is only in the last decade that progress in the manufacture of cement and the resulting improvement in the strength of concrete have been matched by a corresponding advance in the manufacture of high-class steel.

For the last 35 years excellent results have been obtained from a method of calculation which is based only on some very modest slab tests that were made at the end of the last century, but recent improvements in materials have rendered this to some extent out of date; especially so in the Central European countries as a result of the successful appearance of a type of reinforcement which is produced by twisting upon one another two mild steel rods which has the effect of greatly increasing the yield point. A strong desire has, in consequence, been manifested for a general revision of the methods of design, but it has been found inopportune to replace the present methods without first making exhaustive tests over long periods of loading wherein account is taken of plastic deformations. A point of departure for such revision could be found in conclusive measurements of the deformations found to occur in the compressive and tensile zones of actual beams under test; in Central Europe research of this kind has in fact already been begun.

It is not here proposed, however, to deal with this revision of principles, so much as to examine how far these investigations will enable us to bring our existing methods of calculation into better accord with actual properties of the materials of construction that are available today.

The reasoning is based on an extensive series of tests that have been carried out by the German and the Austrian reinforced concrete committees, and on others by various universities in Central Europe. The principle of all these tests has been to make a thorough investigation of the properties of concrete and steel used in making the test specimens, then to vary their strength, and to compare the calculated stresses with the stresses ascertained from failure of the specimen. The results of a great number of such tests have been compiled in diagrams. They show conclusively that even with the highest grade of steel available in the market today the strength of the concrete is normally in such excess over that of the steel that, using normal concrete of 2,000 lb. per square inch and ordinary percentages of reinforcement, it is superfluous to restrict the concrete stress when making the calculation. In practice nearly all reinforced concrete structures depend for their stability on the yield point of the steel. Consequently restrictions on the concrete stress (within practical limits) may be removed, as they constitute an undue handicap to the development of reinforced concrete generally, and especially so when higher grades of steel are used.

Another point which has hitherto prejudiced technicians against the use of higher stresses in the steel is a vague fear of cracks. It is known that although cracks cannot be avoided in test specimens of T-beams where the steel stress exceeds 7,000 lb. per square inch, as proved by hundreds of tests during the last few decades, yet they very seldom appear in actual structures where the monolithic character of reinforced concrete building renders the conditions quite different. This can clearly be seen when the deflections in test beams are compared with those in actual structures, the latter being negligible in comparison. Thus in monolithic buildings the factor of safety is many times what is assumed.

So far only the cracks from the first loadings of test beams have been generally recorded, but these warrant no conclusions as to the actual behaviour of a structure, since they appear at considerably lower loads in cases of repeated or prolonged loading. In normal T-beams even at the initial loading, these cracks occur at stresses corresponding to half the permissible load.

It is known that these cracks result from the failure of concrete in tension, and they are therefore unavoidable whatever the reinforcement. This is an underlying assumption of our whole theory of reinforced concrete, and we cannot both have our cake and eat it by admitting that the cracks must take place, and at the same time proceeding as if they could be eliminated.

Nor would there be any point in such procedure, having regard to the excellent condition of buildings in reinforced concrete all over the world that have stood successfully for nearly 40 years. From the æsthetic standpoint it is known that steel framed buildings encased in plain concrete are certain to show more cracks than buildings in reinforced concrete on account of their unfavourable conditions in regard to shrinkage; yet nobody takes any notice of cracks in such buildings since it is obvious that the concrete is merely a filler. It is time that the question of cracks were approached in a spirit of scientific precision, examining which of them are inoffensive, and which are a menace to safety by laying bare the reinforcement and exposing it to corrosion.

Clearly those cracks which close up on the load being removed are inoffensive, but it is not certain that the reinforcement would

SCHOOL PRINCIPALS

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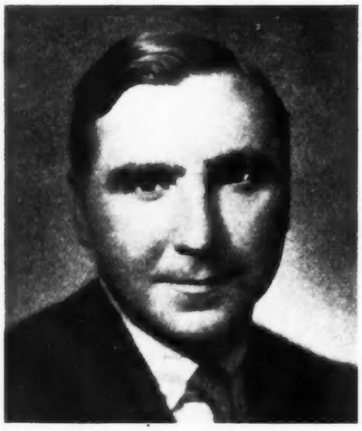
J. S. ALLEN

LEEDS SCHOOL OF ARCHITECTURE



MR. J. S. ALLEN, B.ARCH., A.R.I.B.A., was born in 1898 and received his architectural training at the School of Architecture in the University of Liverpool, his course being interrupted by the war. He graduated (with Honours in Architectural Design) in 1922 and was elected an Associate of the R.I.B.A. in the same year. After post-graduate study in Europe he went to the United States where he was engaged on a number of important buildings, including the Broadway Temple and the Roosevelt Hotel. He was also responsible for the drawing of one of the great murals in the New York Cotton Exchange illustrating the Cotton Ports of the World. Mr. Allen was recalled to England to become senior assistant to Sir Arnold Thornely and Mr. Herbert J. Rowse.

In collaboration, Mr. Allen has been successful in the following competitions: 1st Premium, Schools at Stockport, and 2nd Premium, Police Courts and Fire Station at Accrington.

His appointments include: Hon. Secretary and Member of Council of the Liverpool Architectural Society; Lecturer in Architecture and member of the Board of Studies in Architecture and Town Planning in the University of Liverpool; Member of the R.I.B.A. Board of Architectural Education. He commenced his duties as Head of the Leeds School of Architecture in September last.

be exposed even if they did not close. Exposure, however, will certainly occur if the steel moves within the concrete. The question of cracks is therefore primarily a question of bond.

If the bond is maintained there is no reason to restrict the permissible tensile stress below half the yield point stress; whatever the value of the latter may be: particularly since the sliding effect of different kinds of reinforcement is susceptible to direct measurement and to correlation with the nature of the resulting cracks.

SCOTTISH ARCHITECTS

At a recent meeting of the Council of the Edinburgh Architectural Association, the following members were elected: —Fellows: Messrs. James MacGregor, M.A., A.R.I.B.A., and C. E. Tweedie. Associates: Messrs. R. A. Hurd, F. G. Tait, and M. Penman.

ROYAL INSTITUTE OF THE ARCHITECTS OF IRELAND.

A paper on "The Towns We Live In" was read by Mr. Manning Robertson at a recent meeting of the above Institute.

Fortunately, said the lecturer, Ireland had not to cope with those square miles of dreary brick and mortar that were the despair of England, and which would cost her at least a thousand million pounds to replace. They were in the position of onlookers, and would have no excuse if, through being backward or idle, they did not profit from the mistakes and experience of others. The new Town Planning Bill would give the responsible authorities wide powers to govern the future of their towns and countryside, and the Government should get the fullest credit for giving such a charter of liberty to Ireland.

Discussing the problem of advertisements in towns, he said one could not say that advertising should be abolished, but what was required was advertising in responsible hands under licence. There was a great deal of ugliness in Dublin which could with advantage be hidden behind hoardings, but, conversely, there were many hoardings which were inappropriately placed.

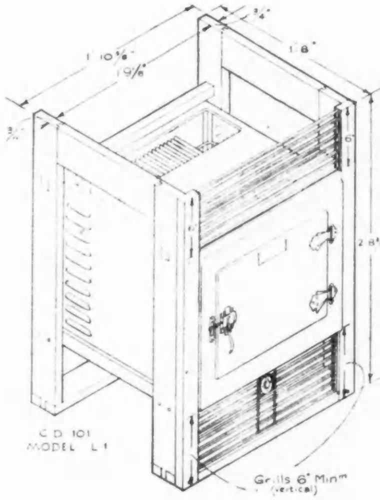
THE BUILDINGS ILLUSTRATED

Sub-Contractors' List

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:—

Hodge Hill Housing Scheme (pages 818-821). General contractors, Scheme No. 1, Housing, Ltd. Scheme No. 2, Thomas Barker and Sons. Sub-contractors: Hinton, Perry and Davenhill, and H. J. and C. Major, tiles; Mobberley and Perry, Ltd., King & Co., and Hadcroft Brick Co., bricks; John Thompson Beacon Windows, Ltd., metal windows and frames; "Paripan," Ltd., paint; Hobbs & Co. and Stourbridge Fire Co., grates; Triplex Foundry Ltd., "Triplex" Grates; "Walpamur" and "Saneros" for internal walls.

Village Hall, Underriver (pages 829-831). General contractors, E. Punnett and Sons. Sub-contractors: Adamsez, sanitary fittings; James Gibbons, ironmongery; Herberts, roof tiling.



TRADE NOTES

[BY F. R. S. YORKE, A.R.I.B.A.]

Built-in Refrigerators

IN order to make the best use of space in the rooms of modern houses and flats it is becoming common practice for architects to build-in units of furniture and equipment wherever possible; so eliminating odd corners that, besides accounting for many cubic feet of wasted space, are almost impossible to clean.

●

Manufacturers, on their part, are concentrating on the production of units suitable for building-in. The movement is not yet a very wide one, but it is apparent from recent *literature* that the emphasis is on the importance of the fitting that can be incorporated in a building scheme at the outset.

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Several types of refrigerator, designed for building-in, are now on the market. Messrs. Electrolux issue a pamphlet giving fixing details for their L.I. (silent motorless) model, in a position beneath the draining board alongside the kitchen sink. A diagram indicating the space that must be allowed for this fittings appears at the head of these notes. Provision must be made for a natural flow of air vertically through the rear of the cabinet. A space of at least 1 ft. 9⅝ ins. must be allowed between the two side members, so that the refrigerator can be placed into position from the front. The grilles, above and below the cabinet, must each be at least 6 ins. high, and the lower one should be hinged to provide access to the drip cup that is suspended from the underside of the refrigerator.

●

The draining board is placed directly above the framework shown in the diagram. The manufacturers suggest that a horizontal board, with grooves getting deeper towards the sink, makes a better job than a board with grooves of even depth placed at an angle.

Flat Roofing

I have received a copy of a report on an investigation of the probable efficiency of Paropa patent roofing, carried out at the Building Research Station.

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The roof, of a somewhat unusual type, is advocated by the manufacturers for use on wood, brick, stone or concrete surfaces. The base is first well primed with a bitumen primer, and waterproofed by means of two coats of bitumen applied hot, and separated by a layer of wool felt or jute ("Paropa Reinforced Bitumastic Proofing") which adheres firmly to the base. On this impermeable covering is laid a coat of cement mortar screeding of the strength dictated by the use to which the roof is put, and usually 1 in. in thickness. The screeding is well tamped and floated, and divided into a system of small squares whilst still plastic. The dividing channels are cut through to the waterproofing membrane, forming expansion joints. After the mortar has hardened, the expansion joints are well primed and filled with an elastic asbestized bitumen, poured whilst hot.

●

When the process is to be carried out on a boarded roof, a layer of bituminous roofing felt is first applied to the boards, and, with the omission of the priming operation, the same procedure is adopted. One of the claims made by the proprietors for their process is that the mortar serves as a thermal insulator. Tests were made in order to discover (1) the extent of softening of the bitumen membrane under the highest temperatures likely to be experienced, (2) the resistance of the cement mortar screeding to the action of frost, (3) the likelihood of blistering or puncture of the bitumen membrane. Such actions as may be anticipated to give rise to these effects are connected with the capillary properties of the porous concrete. Thus in the case of bitumen laid on a concrete screeding the evaporation of water contained in the capillaries may give rise to pressures which, while being insufficient to force out the water, may be capable of producing blisters in the bitumen film, if this becomes sufficiently soft at the temperature attained. The pressures likely to be developed in this manner clearly depend on the force required to empty the capillaries of water. The object of the experiment was therefore to estimate the pressures which could be supported by the wet material.

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The authorities investigating say it is not easy to assess the efficiency of a roof of this type on the basis of laboratory experiments alone, but as far as can be seen from the experimental work carried out, the following conclusions may be drawn :— "Paropa" Bitumastic Proofing will not become excessively soft at the highest summer temperatures. The bituminous expansion joint contains about 3.5 per cent. of asbestos and is of a "rubbery" nature, having a degree of elasticity. It appears likely to fulfil its function as an expansion joint since it neither becomes too brittle at low temperatures, nor too soft in hot weather.

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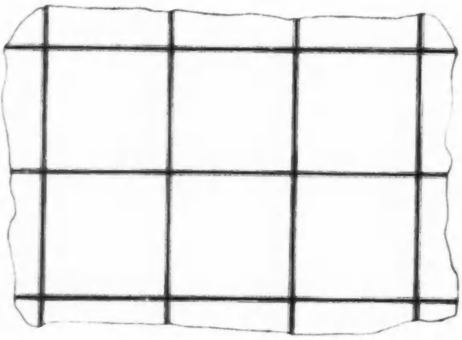

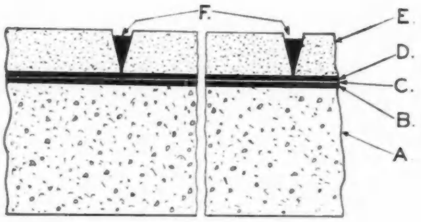

A. *Structural slab—patent hollow tile, reinforced concrete or wood.*

B. *Lower layer of bitumastic proofing.*

C. *Jute or hessian reinforcement.*

D. *Upper layer of bitumastic proofing.*

E. *Cement or granolithic paving.*

F. *Elastic expansion joints.*

The mortar screed, while being readily absorptive of water, appears likely to resist the action of frost satisfactorily. It will tend to lessen the temperature changes due to high absorption of solar heat at a dark coloured bitumen surface. Its open texture will probably not permit the setting up of capillary pressures when filled with water sufficiently intense to puncture the membrane, at least at the lower temperatures likely to be obtained.

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In addition to laboratory tests on specimens, an area of actual roofing was laid down early in the present year in order that observation might be made under natural conditions. A report issued on November 8 indicated that no apparent changes had occurred during the exceptionally hot summer. But the roofing is to remain in position in order that the effects of frost may be examined during the coming winter.

Ready Mixed Concrete

Architects complain that unless supervision is constant, concrete mixed on the site rarely complies exactly with specification; aggregate size, cement content and, particularly, the proportion of mixing water may vary in every mix.

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In order to eliminate this degree of uncertainty, architects and engineers in America have, I understand, encouraged the production of ready-mixed concrete by firms having proper facilities for accurate proportioning, and able to exercise constant supervision economically. These concerns are able to buy at low rates because they buy in bulk, and consequently the cost of transportation is offset by relatively low prices of materials. There are now many companies, with central grading and mixing depots, whose trucks run constantly from a central source of supply to the sites of building or road making operations, providing concrete that conforms exactly to specification.

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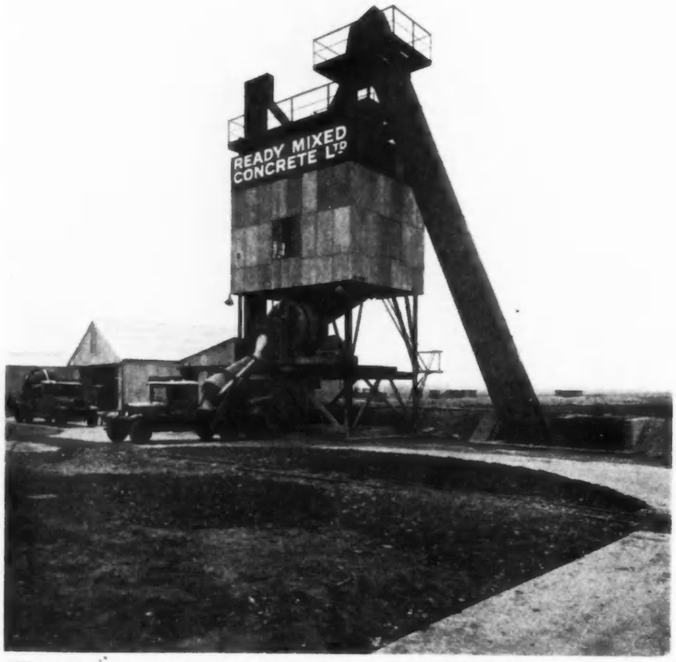
At least one such company operates near London, running 12 lorry-containers, each holding 45 cu. ft. of concrete. At works aggregate is graded and conveyed to high-level containers. Cement is hoisted to bins at a similar level (see photograph). The proportion of cement to aggregate is determined precisely by measuring devices, and the materials are released together to fall into a mixer at lower level. From the mixer they are poured into a lorry-container, and transported to sites within a radius of 15 miles. The container revolves constantly and water is added to the mixture a few minutes before arrival at the building site.



Elevators carrying cement and aggregate to containers at high level, where they are graded and proportioned and released to fall to a mixer; shown in the photograph discharging the "mix" to a lorry-container.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILE RADIUS)

ACTON. *Flats, Factories, etc.* Plans passed by the Corporation : Twelve flats, Lynton Road, for Mr. J. E. Adams ; 16 flats, Hamilton Way, for Mr. F. W. Tempest ; extensions, Atlas Works, Avenue Road, for Mr. R. O. Slipper ; factories, Western Avenue, for Mr. F. E. Simpkins : 12 flats, Leamington Park, for Mr. H. H. R. Ward ; works extensions, School Road, for Messrs. S. Clifford Tee and Gale ; works extensions, Wales Farm Road, for Conveyor and Elevator Co., Ltd.

ACTON. *Flats.* Messrs. E. H. Stoddart & Co. have prepared plans for the erection of 22 flats at Colville Road.

CATERHAM. *Houses, Workshop and Offices.* Plans passed by the U.D.C. : Four houses, Whyteleafe Road, for Messrs. Thomas and Sutcliffe ; two houses, Park Avenue, for Messrs. Thomas Bros. ; four houses, Banstead Road, for Mr. W. R. Quested ; workshop and offices, Essendene Road, for Mr. P. Surridge ; three houses, Church Road, Woldingham, for Sir Bernard Greenwell ; four houses, Newstead Road, for Messrs. Blake, Son and Williams.

CROYDON. *Houses.* The Corporation is to erect 90 houses on the Ham Farm estate to re-house persons to be displaced from slums, at a cost of £39,645.

CROYDON. *Swimming Bath.* The Corporation now recommends proceeding with the lay-out of the Purley Way playing fields, and the construction of a swimming bath, at a cost of £15,600.

CROYDON. *Houses, etc.* Plans passed by the Corporation : Six houses, Hartland Way, for Messrs. Cressey and Barclay ; 116 houses, Gladeside estate, for Messrs. E. and L. Berg, Ltd. ; six houses, Manor Road, for Messrs. Wills and Tappen ; five shops and flats, Old Town, for Mr. H. Sadler ; rebuilding public-house, Selhurst Road, for Mr. A. W. Blomfield on behalf of Stag Brewery Co. ; eight shops and flats, South Norwood Hill, for Mr. E. F. Bates ; two houses, Wickham Road, for Mr. R. W. Trent ; three flats, 50 Birdhurst Road, for Messrs. North, Robins and Wilsdon ; shops, 54-60 Lansdowne Road, for Mr. C. E. Hanscomb ; extensions, Barnacle Works, Bensham Lane, for Messrs. Truett and Steel, Ltd. ; showrooms, 8 Park Lane, for Mr. W. A. Turner ; 30 houses, Shirley Way, for Gower Builders, Ltd. ; 40 houses, Oak Avenue, for Messsrs. Chart, Son and Reading.

EALING. *Houses and Flats.* Plans passed by the Corporation : 44 houses, Mayfield Gardens, for Gt. Western Land Co., Ltd. ; two bungalows, Marnham Crescent, for Mr. T. Bowden ; four blocks of flats, Argyle Road, for Mr. B. de Helsby ; two houses, Russell Road, for Hayes Bridge Estates, Ltd. ; five blocks of flats, Monk's Drive, for Mr. Douglas H. Smith ; two houses, Church Road, for Messrs. Kear and Langham ; two bungalows, Ravenor Park Road, for Mr. H. E. Webb ; 11 houses, Baronsmede, for Messrs. J. Atherton & Co. ; factory, Aintree Road, for Messrs. Percy Bilton, Ltd. ; factory, Park Avenue, for Mr. F. E. Simpkins ; factory, Wadsworth Road, for Mr. G. H. Goldsmith.

ST. JOHN'S WOOD. *Cinema, Shops and Flats.* Mr. Robert Anderson is to erect a cinema and a block of shops and flats on a site bounded by Finchley Road, Adelaide Road, and Upper Avenue Road, St. John's Wood.

SOUTHERN COUNTIES

BRIGHTON. *Houses, Shops and Swimming Bath.* Plans passed by the Corporation : 30 houses and four shops, Carden Avenue, Patcham, for Messrs. Braybons, Ltd. ; six houses, Bevendean estate, for Saltdean Estate Co., Ltd. ; 12 flats, Bath Street, for Mr. T. Bunting ; two houses, Hartington Road, for Mr. F. Lohmann ; News Theatre, Hotel Metropole, King's Road, for Gordon Hotels, Ltd. ; two houses, Marine Drive, Saltdean, for Mr. P. A. Stinson ; six houses, Ladies Mile estate, Patcham, for Ladies Mile Estate, Ltd. ; four houses, Valley Drive, Patcham, for Mr. T. R. Braybon ; swimming bath, West Street, for Brighton Sports Pool, Ltd. ; 10 shops, The Avenue, Bevendean, for Messrs. W. A. Gates and Sons, Ltd.

HERNE BAY. *Bathing Pool.* The Herne Bay U.D.C. has approved a site at Hampton for the construction of a bathing pool. The estimated total cost of the whole scheme, including the provision of a boating lake, children's paddling pool, an amusement park, etc., is £50,000.

PAIGNTON. *Estate development, roads, houses, etc.* Plans passed by the U.D.C. : Two bungalows, off Marldon Road, for Messrs. Lewis and Wills ; estate development, Footlands Road, for Primley Estate ; development, Westbrook estate, Totnes Road, for Messrs. Knapman Bros. ; six houses, Redburn Road, for Mr. A. Chippendale ; rebuilding shops, Winner Street, for Paignton Co-operative Society, Ltd. ; four flats, Eugene Road, for Messrs. E. and A. Diggines ; new roads, Shorton Valley, for Trabay Proprietory, Ltd. ; two houses, Luscombe Lane, for Messrs. Lewis and Bartlett ; four bungalows, Luscombe Lane, for Messrs. A. Matthews (Paignton), Ltd. ; two houses, Eden Vale Road, for Mr. P. D. Cavanna; three houses, Cliff Park estate, for Staverton Builders, Ltd. ; four houses, Occombe Valley Road, and 11 in Shorton Valley Road, for Mr. D. Peeke.

PORTSMOUTH. *Bathing Pool.* The Corporation has approved a revised scheme for the construction of a bathing pool at Hilsea, at a cost of £36,050.

PORTSMOUTH. *Houses.* The Corporation is to erect 24 houses for tenants being displaced through the Kingston Road widening.

SWINDON. *Houses, Garages, Hall.* Plans passed by the Corporation : Three houses, Spring Gardens, for Mr. A. J. Colbourne ; two houses, Marlborough Road, for Messrs. E. H. Bradley and Sons ; 12 garages, off Rosebery Street, for Mr. C. E. Wade ; recreation hall, Dowling Street, for Messrs. Bishop and Fisher.

EASTERN COUNTIES

IPSWICH. The Corporation is to purchase 18 acres at Clapgate Lane for another housing scheme.

LOWESTOFT. *Houses, Shops, Estate Development.* Plans passed by the Corporation : Squash racket court, Borrow Road, for Mr. G. Palgrave Brown ; six houses, off Colville Road, for Mr. G. Gaze ; two houses, Cotmer Road, for Mr. W. Calver ; two houses, Waveney Drive, for Messrs. J. A. Gaze and Sons ; seven houses and shop, Colville Road, Oulton Broad, for Mr. D. Dowell ; two houses, Normanston Drive, for Messrs. W. J. Croft, Ltd. ; two houses, Kimberley Road, for Mr. W. Youngs ; estate development, St. Margarets Road, for Messrs. Warnes and Sons ; two houses, Normanston Drive, for Mr. D. D. Alger ; two houses, Kendal Road, for Mr. P. C. Easey ; two houses, Oulton Road, for Mr. A. E. Ingles ; two houses, Blackheath Road, for Mr. H. J. Betts.

NORWICH. *Slum Clearance.* The Corporation estimates the cost of a five-year slum and re-housing scheme, providing for 2,515 houses, at £650,000.

NORWICH. *Municipal Buildings.* The Ministry of Health is to hold an inquiry into the scheme of the Norwich Corporation, for the erection of municipal offices at a cost of £207,500.

NORTHERN COUNTIES

BARROW-IN-FURNESS. *Houses.* Plans passed by the Corporation : Two houses, Flass Lane, for Messrs. A. Fletcher and Sons ; two houses, Longreins Road, for Messrs. J. H. Neal and Sons, Ltd. ; six houses, Roose Road (amended plan), for Messrs. J. Walker and Sons ; 18 houses, Brook Street, for Messrs. Styles and Bates ; two houses, Central Drive, Walney Island, for Messrs. Askew and Webb ; two houses, Salthouse Road, for Mr. T. Chester.

DEWSBURY. *Houses.* The Corporation is to obtain tenders for the erection of 32 houses at Pilgrim Farm, and 16 at Conyers Pit estate. Plans passed by the Corporation : Four houses, Canterbury Road, for Messrs. Sam Scott and Sons ; four houses, Pentland Road, for Mr. J. Tierney ; two houses, Leeds Road, for Mr. A. Smith ; 18 houses, Huddersfield Road, for Mr. C. F. Napper.

HULL. *Pier improvements, etc.* The Corporation is to improve the Victoria Pier and construct a new pontoon, at a cost of £35,000.

HULL. *Houses.* The Corporation has obtained sanction for a loan of £90,566 for the erection of 314 houses at Endyke Lane estate.

HULL. *School.* The Education Committee is to proceed with the erection of new departments at the Ainthorpe Grove school, at a cost of £30,500.

ROTHERHAM. *Technical College.* The Corporation has obtained sanction for a loan of £20,200, for the erection of a technical college.

ROTHERHAM. *Houses and Shops.* Plans passed by the Corporation : Shop, 111 Main Street, for Messrs. Gallons, Ltd. ; 50 houses, Russell Street, for Messrs. Allott and Dunk ; 22 houses, Richard Road, for Mr. T. Gledhill.

SCARBOROUGH. *Bathing Pool.* The Corporation has approved a revised scheme for bathing pool improvements, including the provision of filtration plant at South Bay, at a cost of £18,282, and sanction is to be sought for a loan for the purpose.

SOUTHPORT. *Houses and Garages.* Plans passed by the Corporation : Four houses, Brighton Road, for Mr. W. Leigh ; workshop and 17 garages, Southbank Road, for Messrs. C. T. Nicklin and Sons, Ltd.

TYNEMOUTH. *Houses.* Plans passed by the Corporation : Two houses, West Chirton estate, for Messrs. Marshall and Tweedy ; six houses, Mowbray Road, for Messrs. Hays and Gray ; two houses, Manorway, Manor estate, for Mr. J. W. Hanson ; eight houses, Roxby Gardens, South End, for Mr. W. Moore ; 22 houses, Pineapple estate, for Messrs. F. R. N. Haswell and Son ; eight houses, Mast Lane estate, for Mr. J. R. Wallace ; two houses, Heaton Terrace, for Mr. S. Pye ; two houses, Preston Colliery estate, for Messrs. Cackett, Burns, Dick and MacKellar ; two houses and shop, Lynn Road, for Mr. W. Moore ; two shops, Wallsend Road, for Messrs. Dixon and Bell.

WAKEFIELD. *Houses.* Plans passed by the Corporation : Two houses, Richmond Road, for Messrs. Kay and Lunan ; four houses, Manygates Lane, for Mr. J. D. Richards ; four houses, Leeds Road, etc., for Mr. J. R. Lister ; six houses, Denby Dale Road, for Mr. J. W. Tapster ; two houses, Horbury Road, for Messrs. W. H. Nicholson and Sons, Ltd. ; six houses, Sycamore Street, for Messrs. Dobson and Gighall ; 16 houses, Flanshaw Lane, for Mr. J. Percy Firth ; two houses, Horbury Road, for Mr. N. Gill ; six houses, Denby Dale Road, for Mr. A. Bell ; 44 houses, off Flanshaw Lane, for Messrs. G. Crook and Sons, Ltd. ; two houses, Richmond Road, for Mr. C. S. Williams.

The Housing Committee is to prepare a scheme for the erection of a further 50 houses on the Lupset estate.

WALES

SWANSEA. *Power Station and Houses.* Plans passed by the Corporation : Shops and offices, Union Street and Orange Street, for Mr. W. G. P. Powell ; two houses, Penlan Road, for Mr. Ivor Evans ; two houses, Heathfield Street, for Mr. C. Clarke ; power station, Tir John North, for Corporation Electricity Committee ; three houses, Woodlands Terrace, for Mr. John Oliver ; two houses, Lon Coed Road, for Mr. S. D. Thomas ; four houses, Derwen Fawr Road, for Mr. Syd Davies ; four houses, Neath Road, for Mr. Thomas Rees ; four houses, Lon Cadog, for Mr. I. J. Aubrey ; four houses, Brookvale Road, for Mr: D. Griffiths ; two houses, Druslwyn Road, for Mr. G. McGuirl ; two houses, Park Road, for Mr. Daniel Lewis ; 18 bungalows, Lon Tiefy, for Mr. Syd Davies.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen ; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	Aberdare ..	S. Wales & M.	1 5	1 0¾
A_1	Abergavenny ..	S. Wales & M.	1 5	1 0¾
A_3	Abingdon ..	S. Counties	1 4	1 0
A	Accrington ..	N.W. Counties	1 5½	1 1¼
A_3	Addlestone ..	S. Counties	1 4	1 0
A	Adlington ..	N.W. Counties	1 5½	1 1¼
A	Airdrie ..	Scotland	•1 5½	1 1¼
C	Aldeburgh ..	E. Counties	1 1½	10¼
A	Altrincham ..	N.W. Counties	1 5½	1 1¼
B_3	Appleby ..	N.W. Counties	1 2	10½
A	Ashton-under-Lyne	N.W. Counties	1 5½	1 1¼
A_3	Atherstone ..	Mid. Counties	1 4	1 0
B_2	Aylesbury ..	S. Counties	1 2½	11
B_1	Banbury ..	S. Counties	1 3	11¼
B_1	Bangor ..	N.W. Counties	1 3	11¼
A_3	Barnard Castle	N.E. Coast	1 4	1 0
A	Barnsley ..	Yorkshire	1 5½	1 1¼
B	Barnstaple ..	S.W. Counties	1 3½	11¾
A	Barrow ..	N.W. Counties	1 5½	1 1¼
A	Barry ..	S. Wales & M.	1 5½	1 1¼
B_1	Basingstoke ..	S.W. Counties	1 3	11¼
A_3	Bath	S.W. Counties	1 4	1 0
A	Batley ..	Yorkshire	1 5½	1 1¼
A_3	Bedford ..	E. Counties	1 4	1 0
A_2	Berwick-on-Tweed	N.E. Coast	1 4½	1 0½
A_2	Bewdley ..	Mid Counties	1 4½	1 0½
B_3	Bicester ..	S. Counties	1 2	10½
	Birkenhead ..	N.W. Counties	•1 7	1 2¼
A	Birmingham ..	Mid. Counties	1 5½	1 1¼
A_1	Bishop Auckland	N.E. Coast	1 5	1 0¾
A	Blackburn ..	N.W. Counties	1 5½	1 1¼
A	Blackpool ..	N.W. Counties	1 5½	1 1¼
A	Blyth	N.E. Coast	1 5½	1 1¼
B_2	Bognor ..	S. Counties	1 2½	11
A	Bolton ..	N.W. Counties	1 5½	1 1¼
A	Boston.. ..	Mid. Counties	1 4	1 0
A	Bournemouth..	S Counties	1 4	1 0
B_2	Bovey Tracey	S.W. Counties	1 2½	11
A	Bradford ..	Yorkshire	1 5½	1 1¼
A_1	Brentwood ..	E. Counties	1 5	1 0¾
A	Bridgend ..	S. Wales & M.	1 5½	1 1¼
B_1	Bridgwater ..	S.W. Counties	1 3	11¼
A_1	Bridlington ..	Yorkshire	1 5	1 0¾
A	Brighouse ..	Yorkshire	1 5½	1 1¼
A_3	Brighton ..	S. Counties	1 4	1 0
A	Bristol ..	S.W. Counties	1 5½	1 1¼
B_3	Brixham ..	S.W. Counties	1 2	10½
A_2	Bromsgrove ..	Mid. Counties	1 4½	1 0½
C	Bromyard ..	Mid. Counties	1 1½	10¼
A	Burnley ..	N.W. Counties	1 5½	1 1¼
A	Burslem ..	Mid. Counties	1 5½	1 1¼
A	Burton-on-Trent	Mid. Counties	1 5½	1 1¼
A	Bury	N.W. Counties	1 5½	1 1¼
A_1	Buxton ..	N.W. Counties	1 5	1 0¾
A_2	Cambridge..	E. Counties	1 4½	1 0½
B_2	Canterbury ..	S. Counties	1 2½	11
A	Cardiff ..	S. Wales & M.	1 5½	1 1¼
A	Carlisle ..	N.W. Counties	1 5½	1 1¼
B	Carmarthen ..	S. Wales & M.	1 3½	11¾
B	Carnarvon ..	N.W. Counties	1 3½	11¾
A	Carnforth ..	N.W. Counties	1 5½	1 1¼
A	Castleford ..	Yorkshire	1 5½	1 1¼
B	Chatham ..	S. Counties	1 3½	11¾
B	Chelmsford ..	E. Counties	1 3½	11¾
A_3	Cheltenham ..	S.W. Counties	1 4	1 0
A	Chester ..	N.W. Counties	1 5½	1 1¼
A	Chesterfield ..	Mid. Counties	1 5½	1 1¼
B_2	Chichester ..	S Counties	1 2½	11
A	Chorley ..	N.W. Counties	1 5½	1 1¼
B_2	Cirencester ..	S. Counties	1 2½	11
A	Clitheroe ..	N.W. Counties	1 5½	1 1¼
A	Clydebank ..	Scotland	1 5½	1 1¼
A	Coalville ..	Mid. Counties	1 5½	1 1¼
A_3	Colchester ..	E. Counties	1 4	1 0
A	Colne	N.W. Counties	1 5½	1 1¼
A_2	Colwyn Bay	N.W. Counties	1 4½	1 0½
A_1	Consett ..	N.E. Coast	1 5	1 0¾
A_2	Conway ..	N.W. Counties	1 4½	1 0½
A	Coventry ..	Mid. Counties	1 5½	1 1¼
A_2	Crewe ..	N.W. Counties	1 4½	1 0½
A_3	Cumberland ..	N.W. Counties	1 4	1 0
A	Darlington	N.E. Coast	1 5½	1 1¼
A	Darwen ..	N.W. Counties	1 5½	1 1¼
A_2	Deal	S. Counties	1 2½	11
A_3	Denbigh ..	N.W. Counties	1 4	1 0
A	Derby	Mid. Counties	1 5½	1 1¼
A	Dewsbury ..	Yorkshire	1 5½	1 1¼
B	Didcot ..	S. Counties	1 3½	11¾
A	Doncaster ..	Yorkshire	1 5½	1 1¼
B_2	Dorchester ..	S.W. Counties	1 2½	11
A_3	Driffield ..	Yorkshire	1 4	1 0
A_2	Droitwich ..	Mid. Counties	1 4½	1 0½
A	Dudley ..	Mid. Counties	1 5½	1 1¼
A	Dundee ..	Scotland	1 5½	1 1¼
A	Durham ..	N.E. Coast	1 5½	1 1¼
A_3	Eastbourne	S. Counties	1 4	1 0
A_1	Ebbw Vale ..	S. Wales & M.	1 5	1 0¾
A	Edinburgh ..	Scotland	1 5½	1 1¼
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 5	1 0¾
A_2	Exeter ..	S.W. Counties	•1 4½	1 0½
B_1	Exmouth ..	S.W. Counties	1 3	11¼
A_3	Felixstowe	E. Counties	1 4	1 0
A_3	Filey	Yorkshire	1 4	1 0
A	Fleetwood ..	N.W. Counties	1 5½	1 1¼
B_2	Folkestone ..	S. Counties	1 2½	11
A	Frodsham ..	N.W. Counties	1 5½	1 1¼
B_2	Frome ..	S.W. Counties	1 2½	11
A	Gateshead	N.E. Coast	1 5½	1 1¼
B	Gillingham ..	S. Counties	1 3½	11¾
A_2	Gloucester ..	S.W. Counties	1 4½	1 0½
A_2	Goole	Yorkshire	1 4½	1 0½
A_3	Gosport ..	S. Counties	1 4	1 0
A_3	Grantham ..	Mid. Counties	1 4	1 0
A_1	Gravesend ..	S. Counties	1 5	1 0¾
A	Greenock ..	Scotland	•1 5½	1 1¼
A	Grimsby ..	Yorkshire	1 5½	1 1¼
B_1	Guildford ..	S. Counties	1 3	11¼
A	Halifax ..	Yorkshire	1 5½	1 1¼
A	Hanley ..	Mid. Counties	1 5½	1 1¼
A	Harrogate ..	Yorkshire	1 5½	1 1¼
A	Hartlepools ..	N.E. Coast	1 5½	1 1¼
B	Harwich ..	E. Counties	1 3½	11¾
B_2	Hastings ..	S. Counties	1 2½	11
A_3	Hatfield ..	S. Counties	1 4	1 0
B	Hereford ..	S.W. Counties	1 3½	11¾
A_3	Hertford ..	E. Counties	1 4	1 0
A	Heysham ..	N.W. Counties	1 5½	1 1¼
A	Howden ..	N.E. Coast	1 5½	1 1¼
A	Huddersfield ..	Yorkshire	1 5½	1 1¼
A	Hull	Yorkshire	1 5½	1 1¼
A	Ilkley ..	Yorkshire	1 5½	1 1¼
A	Immingham ..	Mid. Counties	1 5½	1 1¼
A_3	Ipswich ..	E. Counties	1 4	1 0
B_3	Isle of Wight ..	S. Counties	1 2	10½
A	Jarrow ..	N.E. Coast	1 5½	1 1¼
A	Keighley ..	Yorkshire	1 5½	1 1¼
B	Kendal ..	N.W. Counties	1 3½	11¾
B	Keswick ..	N.W. Counties	1 3½	11¾
A	Kettering ..	Mid. Counties	1 4½	1 0½
A_2	Kidderminster	Mid. Counties	1 4½	1 0½
B_2	King's Lynn ..	E. Counties	1 2½	11
A	Lancaster..	N.W. Counties	1 5½	1 1¼
A_1	Leamington ..	Mid. Counties	1 5	1 0¾
A	Leeds ..	Yorkshire	1 5½	1 1¼
A	Leek	Mid. Counties	1 5½	1 1¼
A	Leicester ..	Mid. Counties	1 5½	1 1¼
A	Leigh	N.W. Counties	1 5½	1 1¼
B_3	Lewes	S. Counties	1 2	10½
A_2	Lichfield ..	Mid. Counties	1 4½	1 0½
A	Lincoln ..	Mid. Counties	1 5½	1 1¼
	Liverpool ..	N.W. Counties	•1 7	1 2¼
A_2	Llandudno ..	N.W. Counties	1 4½	1 0½
A	Llanelly ..	S. Wales & M.	1 5½	1 1¼
	London (12-miles radius)		1 7	1 2¼
	Do. (12-15 miles radius)		1 6½	1 2
A	Long Eaton ..	Mid. Counties	1 5½	1 1¼
A	Loughborough	Mid. Counties	1 5½	1 1¼
A_3	Luton	E. Counties	1 4	1 0
A	Lytham ..	N.W. Counties	1 5½	1 1¼
A_1	Macclesfield	N.W Counties	1 5	1 0¾
B	Maidstone ..	S. Counties	1 3½	11¾
A_3	Malvern ..	Mid. Counties	1 4	1 0
A	Manchester ..	N.W. Counties	1 5½	1 1¼
A	Mansfield ..	Mid. Counties	1 5½	1 1¼
B_1	Margate ..	S. Counties	1 3	11¼
A_3	Matlock ..	Mid. Counties	1 4	1 0
A_1	Merthyr ..	S. Wales & M.	1	1 0¾
A	Middlesbrough	N. E. Coast	1 5½	1 1¼
A_2	Middlewich ..	N.W. Counties	1 4½	1 0½
B_2	Minehead ..	S.W. Counties	1 2½	11
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 2½	11
A	Morecambe ..	N.W. Counties	1 5½	1 1¼
A_2	Nantwich ..	N.W. Counties	1 4½	1 0½
A	Neath	S. Wales & M.	1 5½	1 1¼
A	Nelson ..	N.W. Counties	1 5½	1 1¼
A	Newcastle ..	N.E. Coast	1 5½	1 1¼
A	Newport ..	S. Wales & M.	1 5½	1 1¼
A	Normanton ..	Yorkshire	1 5½	1 1¼
A_1	Northampton..	Mid. Counties	1 5	1 0¾
A	North Staffs. ..	Mid. Counties	1 5½	1 1¼
A	North Shields..	N.E. Coast	1 5½	1 1¼
A_2	Norwich ..	E. Counties	1 4½	1 0½
A	Nottingham ..	Mid. Counties	1 5½	1 1¼
A	Nuneaton ..	Mid. Counties	1 5½	1 1¼
A_3	Oakham ..	Mid. Counties	1 4	1 0
A	Oldham ..	N.W. Counties	1 5½	1 1¼
A_3	Oswestry ..	N.W. Counties	1 4	1 0
A_2	Oxford ..	S. Counties	1 4½	1 0½
A	Paisley ..	Scotland	•1 5½	1 1¼
B_3	Pembroke ..	S. Wales & M.	1 2	10½
A	Perth	Scotland	•1 5½	1 1¼
A_2	Peterborough	E. Counties	1 4½	1 0½
A	Plymouth ..	S.W. Counties	•1 5½	1 1¼
A	Pontefract ..	Yorkshire	1 5½	1 1¼
A_1	Pontypridd ..	S. Wales & M.	1 5	1 0¾
A_3	Portsmouth ..	S. Counties	1 4	1 0
A	Preston ..	N.W. Counties	1 5½	1 1¼
A	Queensferry	N.W. Counties	1 5½	1 1¼
A_2	Reading ..	S. Counties	1 4½	1 0½
B	Reigate ..	S. Counties	1 3½	11¾
A_3	Retford ..	Mid Counties	1 4	1 0
A_1	Rhondda Valley	S. Wales & M.	1 5	1 0¾
A_3	Ripon	Yorkshire	1 4	1 0
A	Rochdale ..	N.W. Counties	1 5½	1 1¼
B	Rochester ..	S. Counties	1 3½	11¾
A_1	Ruabon ..	N.W. Counties	1 5	1 0¾
A	Rugby ..	Mid. Counties	1 5½	1 1¼
A_3	Rugeley ..	Mid. Counties	1 4	1 0
A	Runcorn ..	N.W. Counties	1 5½	1 1¼
A_2	St. Albans ..	E. Counties	1 4½	1 0½
A	St. Helens ..	N.W. Counties	1 5½	1 1¼
B_3	Salisbury ..	S.W. Counties	1 2	10½
A_1	Scarborough ..	Yorkshire	1 5	1 0¾
A	Scunthorpe ..	Mid. Counties	1 5½	1 1¼
A	Sheffield ..	Yorkshire	1 5½	1 1¼
A	Shipley ..	Yorkshire	1 5½	1 1¼
A_2	Shrewsbury ..	Mid. Counties	1 4½	1 0½
A_2	Skipton ..	Yorkshire	1 4½	1 0½
A_3	Slough ..	S. Counties	1 4	1 0
A_2	Solihull ..	Mid. Counties	1 4½	1 0½
A_2	Southampton	S. Counties	1 4½	1 0½
A_2	Southend-on-Sea	E. Counties	1 4½	1 0½
A	Southport ..	N.W. Counties	1 5½	1 1¼
A	S. Shields ..	N.E. Coast	1 5½	1 1¼
A_2	Stafford ..	Mid. Counties	1 4½	1 0½
A	Stockport ..	N.W. Counties	1 5½	1 1¼
A	Stockton-on-Tees	N.E. Coast	1 5½	1 1¼
A	Stoke-on-Trent	Mid. Counties	1 5½	1 1¼
B	Stroud ..	S.W. Counties	1 3½	11¾
A	Sunderland ..	N.E. Coast	1 5½	1 1¼
A	Swadlincote ..	Mid. Counties	1 5½	1 1¼
A	Swansea ..	S. Wales & M.	1 5½	1 1¼
A_3	Swindon ..	S.W. Counties	1 4	1 0
A_1	Tamworth ..	N.W. Counties	1 5	1 0¾
B	Taunton ..	S.W. Counties	1 3½	11¾
A	Teesside Dist...	N.E. Counties	1 5½	1 1¼
A_3	Teignmouth ..	S.W. Coast	1 4	1 0
A	Todmorden ..	Yorkshire	1 5½	1 1¼
A_1	Torquay ..	S.W. Counties	1 5	1 0¾
C	Truro	S.W. Counties	1 1½	10¼
B	Tunbridge Wells	S. Counties	1 3½	11¾
A	Tunstall ..	Mid. Counties	5½	1¼
A	Tyne District ...	N. E. Coast	1 5½	1¼
A	Wakefield	Yorkshire	1 5½	1 1¼
A	Walsall ..	Mid. Counties	1 5½	1 1¼
A	Warrington ..	N.W. Counties	1 5½	1 1¼
A_1	Warwick ..	Mid. Counties	1 5	1 0¾
A_2	Wellingborough	Mid. Counties	1 4½	1 0½
A	West Bromwich	Mid. Counties	1 5½	1 1¼
A_2	Weston-s.-Mare	W. Counties	1 4½	1 0½
A_2	Whitby ..	Yorkshire	1 4½	1 0½
A	Widnes ..	N.W. Counties	1 5½	1 1¼
A	Wigan ..	N.W. Counties	1 5½	1 1¼
B_1	Winchester ..	S. Counties	1 3	11¼
A_3	Windsor ..	S. Counties	1 4	1 0
A	Wolverhampton	Mid. Counties	1 5½	1 1¼
A_2	Worcester ..	Mid. Counties	1 4½	1 0½
A_3	Worksop ..	Yorkshire	4	1 0
A_1	Wrexham ..	N.W. Counties	5	1 0¾
A_3	Wycombe ..	S. Counties	4	1 0
B_1	Yarmouth ..	E. Counties	1 3	11¼
B_1	Yeovil ..	S.W. Counties	1 3	11¼
A	York	Yorkshire	1 5½	1 1¼

• In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	7
Carpenter	,,		1	7
Joiner	,,		1	7
Machinist	,,		1	8
Mason (Banker)	,,		1	7
,, (Fixer)	,,		1	8
Plumber	,,		1	7
Painter	,,		1	6
Paperhanger	,,		1	6
Glazier	,,		1	7
Slater	,,		1	7
Scaffolder	,,		1	3
Timberman	,,		1	5
Navvy	,,		1	2½
General Labourer	,,		1	2½
Lorryman	,,		1	5
Crane Driver	,,		1	6
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement	,,	2	6	0
Rapid Hardening Cement	,,	2	13	6
White Portland Cement	,,	8	15	0
Thames Ballast	per Y.C.		6	3
¾" Crushed Ballast	,,		6	9
Building Sand	,,		7	3
Washed Sand	,,		8	3
2" Broken Brick	,,		8	0
¾" ,, ,,	,,		10	3
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest bends	,,	4	3	6	3
Single junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	18	0
Grooved do.	,,	3	0	0
Phorpres bricks	,,	2	18	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	8	17	6
,, Wirecuts	,,	7	17	6
,, Brindles	,,	7	0	0
,, Bullnose	,,	9	0	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	7	10	0
Luton Facings	,,	7	10	0
Phorpres White Facings	,,	3	17	3
Phorpres Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	0	0
Headers	,,	20	10	0
Bullnose	,,	27	10	0
Double Stretchers	,,	29	10	0
Double Headers	,,	26	10	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, *Add*	,,	2	0	0
,, Other Colours	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	4½
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	28	17	6
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, green	,, ,,	24	7	4
Best machine roofing tiles	,,	4	10	0
Best hand-made do.	,,	5	0	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		s.	d.
Good carcassing timber	F.C.	2	2
Birch	as 1" F.S.		9
Deal, Joiner's	,, ,,		5
,, ,, 2nds	,, ,,		4
Mahogany, Honduras	,, ,,	1	3
,, African	,, ,,	1	1
,, Cuban	,, ,,	2	6
Oak, plain American	,, ,,	1	0
,, Figured ,,	,, ,,	1	3
,, Plain Japanese	,, ,,	1	2
,, Figured ,,	,, ,,	1	5
,, Austrian wainscot	,, ,,	1	6
,, English	,, ,,	1	11
Pine, Yellow	,, ,,	1	0
,, Oregon	,, ,,		4
,, British Columbian	,, ,,		4
Teak, Moulmein	,, ,,	1	3
,, Burma	,, ,,	1	2
Walnut, American	,, ,,	2	3
,, French	,, ,,	2	3
Whitewood, American	,, ,,	1	1

		£	s.	d.
Deal floorings, ¾"	Sq.		18	6
,, ⅞"	,,	1	1	6
,, 1"	,,	1	2	0
,, 1¼"	,,	1	5	0
,, 1½"	,,	1	10	0
Deal matchings ⅝"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	$\frac{3}{16}$"			¼"			⅜"			½"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	-	1/0½	10	-
Figured Oak 1 side	8½	7	-	10	8	-	11½	-	-	1/6	-	-
Plain Oak 1 side	6½	6	-	7½	7	-	9½	-	-	1/-	-	-
Oregon Pine	5	4	-	5½	5	-	6	-	-	-	-	-

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		½"	¾"	1"	1¼"	2"
Tubes, 2'-14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"-23½" long	each	10	1/1	1/11	2/8	4/9
,, 3"-11½" long	,,	7	9	1/3	1/8	3/-
Long screws, 12"-23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"-11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/-	3/-	5/6	6/9	10/-
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/-	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain Sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/-	2/-
Flanges	,,	9	1/-	1/4	1/9	2/9
Caps	,,	3½	5	8	1/-	2/-
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/-	7/6	10/-	21/-

Discounts:

	Per cent.		Per cent.
TUBES.			
Gas	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½
FITTINGS.			
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	10	9
Mild steel reinforcing rods, ¼"	,,	8	6
,, ,, ⅜"	,,	8	3
,, ,, ½"	,,	8	0
,, ,, ⅝"	,,	7	6
,, ,, ¾"	,,	7	6
,, ,, 1"	,,	7	6
,, ,, 1¼"	,,	7	6
,, ,, 1½"	,,	7	6

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		8		10
Shoes	each	2	0	3	0
Anti-splash shoes	,,	4	6	8	0
Boots	,,	3	0	4	0
Bends	,,	2	7	3	9
,, with access door	,,	—		6	3
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	3	9	6	0
Plinth bends, 4½" to 6"	,,	3	9	5	3
Half-round rain-water gutters of			5		
ordinary thickness metal	F.R.		6		6
Stop ends	each		7		6
Angles	,,	1	0	1	11
Obtuse angles	,,	2		2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	1	0	6
,, drawn pipes	,,		17	6
,, soil pipe	,,	1	0	6
,, scrap	,,		11	0
Solder, plumbers'	lb.			10
,, fine do.	,,		1	0
Copper, sheet	,,			8½
,, tubes	,,			11

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz., squares n/e 2 ft.	s. F.S.					2½
,, ,, 26 oz. ,, ,, ,,	,,					3½
Arctic glass, white	,,					7
Cathedral glass, white, dbl.-rolled, plain, hammered, rimpled, waterwite	,,					6½
¼" Hartley's rough rolled	,,					7
¼" ,, wired cast	,,					10
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,		†7½	to	‡1	0
,, ,, 2	,,		†10	,,	‡1	3½
,, ,, 3	,,	†1	4½	,,	‡1	10
,, ,, 4	,,	†1	11	,,	‡2	4
,, ,, 6	,,	†2	3	,,	‡2	7½
,, ,, 8	,,	†2	5	,,	‡3	0½
,, ,, 12	,,	†2	10	,,	‡3	3½
,, ,, 20	,,	†3	3½	,,	‡3	9
,, ,, 45	,,	†3	6½	,,	‡4	0½
,, ,, 65	,,	†3	11½	,,	‡4	4
,, ,, 90	,,	†4	4	,,	‡4	9
,, ,, 100	,,	†4	6	,,	‡4	11
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

†*Ordinary glazing quality.* ‡*Selected glazing quality.*

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		2	2½
Boiled oil	,,		2	4½
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	2	6	0
,, ordinary	,,	2	0	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		2	9
,, to reduce levels n/e 5' 0" deep and cart away	Y.C.		8	6
,, to form basement n/e 5' 0" deep and cart away	,,		9	0
,, ,, 10' 0" deep and cart away	,,		9	6
,, ,, 15' 0" deep and cart away	,,		10	0
If in stiff clay . . . add	,,		2	6
If in underpinning . . . ,,	,,		4	0
Planking and strutting to sides of excavation	F.S.		1	0
,, ,, to pier holes	,,			5
,, ,, to trenches	,,			5
,, ,, extra, only if left in	,,			3
Hardcore, filled in and rammed	Y.C.		10	0
Portland cement concrete in foundations (6-1)	,,	1	6	0
,, ,, (4-2-1)	,,	1	12	6
,, ,, underpinning	,,	1	16	0
Finishing surface of concrete, spade face	Y.S.			7

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 6	2 3
Extra, only for bends	Each	2 8	3 9
,, junctions		3 9	4 6
Gullies and gratings	,,	16 6	18 0
Cast iron drains, and laying and jointing	F.R.	4 9	6 9
Extra, only for bends	Each	10 6	15 6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	27	10	0
,, ,, in cement	,,	28	15	0
,, Stocks in cement	,,	35	0	0
,, Blues in cement	,,	52	0	0
Extra only for circular on plan	,,	2	0	0
,, backing to masonry	,,	1	10	0
,, raising on old walls	,,	2	0	0
,, underpinning	,,	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	,,			8½
,, ,, ,, red brick facings and pointing	,,			11
,, ,, ,, blue brick facings and pointing	,,		1	4
,, ,, ,, glazed brick facings and pointing	,,		3	6
Tuck pointing	,,			7
Weather pointing in cement	,,			3½
Slate dampcourse	,,			10
Vertical dampcourse	,,		1	1

ASPHALTER

		s.	d.
¾" Horizontal dampcourse	Y.S.	4	6
¾" Vertical dampcourse	,,	6	9
¾" paving or flat	,,	4	0
1" paving or flat	,,	5	6
1" × 6" skirting	F.R.	1	0
Angle fillet	,,		2
Rounded angle	,,		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.		17	9
Bath stone and do., all as last	,,		13	6
Artificial stone and do.	,,		13	0
York stone templates, fixed complete	,,		10	6
,, thresholds	,,		13	6
,, sills	,,	1	0	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	,,	3	7	0
Do., 24" × 12"	,,	3	17	0
Westmorland slating, laid with diminished courses	,,	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	,,	3	0	0
Do., all as last, but of machine-made tiles.	,,	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	,,	4	6	6
,, ,, ,, ,, ,, ,, (green)	,,	4	15	0

CARPENTER AND JOINER

		£	s.	d
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	5	0
Shuttering to sides and soffits of beams	F.S.			8
,, to stanchions	,,			8
,, to staircases	,,		1	8
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	,,		4	6
,, ,, roofs	,,		6	6
,, ,, trusses	,,		7	6
,, ,, partitions	,,		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" ,, ,, ,, ,,	,,	1	17	6
1¼" ,, ,, ,, ,,	,,	2	3	0
¾" × 2" fir battening for Countess slating	,,		9	6
Do. for 4" gauge tiling	,,		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S		2	3
,, ,, ,, 2 ,,	,,		2	9
,, ,, ,, 3 ,,	,,		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" ,, ,, ,, ,, ,,	,,		1	6
" deal wrought rounded roll	F.R.			8
" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼" do.	,,	2	10	0
1½" do.	,,	2	17	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	6
1½" do.	,,		1	9

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	9½
2" ,, ,,	,,	1	11½
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" beads, 1" inside and outside linings, ⅜" parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	3	7
2" ,, ,, ,,	,,	3	10
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" ,, ,, ,,	,,	2	8
1½" ,, but moulded both sides	,,	2	4
2" ,, ,,	,,	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	0
4½" × 3½" ,, ,,	,,	1	4
1¼" deal tongued and moulded window-board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	2	6
1½" deal moulded wall strings	,,	2	1
1½" ,, outer strings	,,	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" ,, ,,	,,	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	,,	6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		15	6
Riveted plate or compound girders, and hoisting and fixing in position	,,		19	6
Do. stanchions with riveted caps and bases and do.	,,		19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	,,		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters, etc.	Per cwt.	1	14	0
Do. in flashings		1	17	6
Do. in covering to turrets, etc.	,,	2	3	6
Do. in soakers	,,	1	9	6
Labour to welted edge	F.R.			3½
Open copper nailing	,,			3½
Close ,, ,,	,,			4½

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 0	1 2	1 5	2 1	3 0	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 3
Do. to stop ends	,,	6½	8	9	11	1	—
Boiler screws and unions	,,	3 3	3 9	5 0	8 0	—	—
Lead traps	,,	—	—	—	6 3	8 9	—
Screw down bib valves	,,	6 9	9 6	11 0	—	—	—
Do. stop cocks	,,	9 0	11 0	14 6	20 6	47 0	—

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	,,	1	6
Do. outlets	,,	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	,,	5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		2	3
Do. in n/w to beams, stanchions, etc.	,,		3	6
Lathing with sawn laths to ceilings	,,		1	4
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	,,		1	8
Do. vertical	,,		2	1
Rough render on walls	,,		1	3
Render, float and set in lime and hair	,,		1	11
Render and set in Sirapite	,,		2	1
Render, backing in cement and sand, and set in Keene's cement	,,		2	10
Extra, only if on lathing	,,			4
Keene's cement, angle and arris	F.R.			6
Arris	,,			2
Rounded angle, small	,,			3
Plain cornices in plaster, including dubbing out, per 1" girth	,,			1½
1" granolithic pavings	Y.S.		3	6
1½" ,,	,,		4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	,,		17	6
9" × 3" ,, ,, ,, ,,	,,	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		7½
26 oz. do. and do.	,,		8½
Arctic glass and glazing with putty	,,	1	1
Cathedral glass and do.	,,	1	2
Glazing only, British polished plate	,,		7
Extra, only if in beads	,,		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6½
Do. and distemper walls	,,		9
Do. with washable distemper	,,	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3	3
Do. on woodwork	,,	3	6
Do. on steelwork	,,	3	0
Do. and brush grain and twice varnish	,,	5	6
Stain and twice varnish woodwork	,,	1	11
Stain and wax-polish woodwork	,,	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper . . . from	,,	2	9

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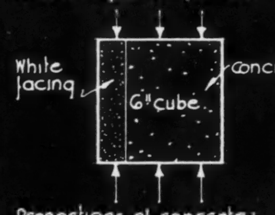
COMPARATIVE TABLE OF WEIGHT, CRUSHING STRENGTH, & ABSORPTION OF VARIOUS BUILDING STONES.

TYPE OF STONE.		Weight in lbs per C. ft.	Crushing strength in tons per sq. ft.	Absorption % of the dry weight.
"DURUS" CAST STONE	Test Nº 1.	139·76 lbs.	351·1 tons.	0·96 %
	Test Nº 2.	140·80 lbs.	356·2 tons.	1·07 %
PORTLAND, average		132 lbs.	204 tons.	7·5 %
BATH STONE, average		128 lbs.	118 tons.	6·2 %
SANDSTONE, (Red Mansfield.)		143 lbs.	592 tons.	4·58 %
HOLLINGTON, (White.)		133 lbs.	260 tons.	5·4 %
HAM HILL, (Yellow Bed.)		135 lbs.	207 tons.	7·67 %
KETTON,		140 lbs.	102 tons.	9·2 %

Test pieces used in the crushing strength tests.


White facing
Concrete
6" cube

Proportions of concrete:
2 parts shingle, 1¼ sand & 1 part cement

Tests by David Kirkaldy & Son.

"DURUS" CAST STONE.

CASTING,

1. Lintols can be reinforced & cast in considerable lengths without undue risks of breakage.
2. In various cases R.S.J's can be cast in the stone during manufacture, this being a great advantage over natural stone.
3. Where a deep soffit is required (e.g. shopfronts etc.) suitable lugs may be inserted in the casting. These cannot be drawn out, & are therefore much superior to the usual type of rag-bolts.

WEATHERING,

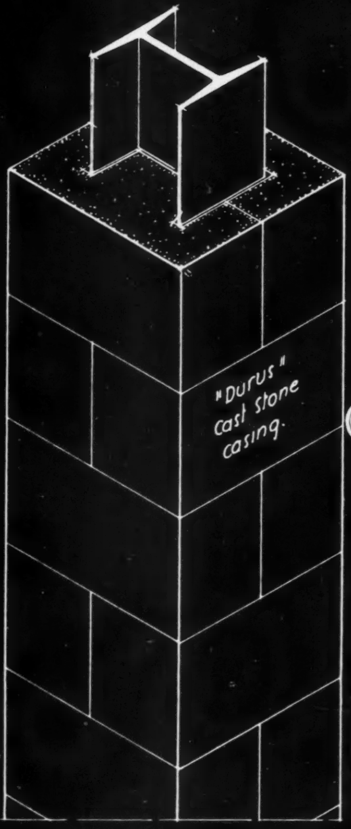
1. Durus stone does not deteriorate in the London atmosphere.

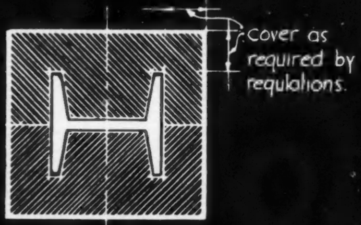
USES:

for masonry,
for facing work,
for stone dressings,
for telephone boxes,
for Police booths, etc.

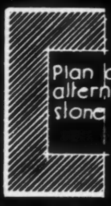
STAINING,

1. Can be grouted in cement without risk of stains appearing on the surface, as with natural stone.
2. Need not be treated on the back & joints to prevent staining. (Such treatment is necessary with natural stones & causes a lack of adhesion between the stone & the backing.)
3. Is not affected by cement in any way.

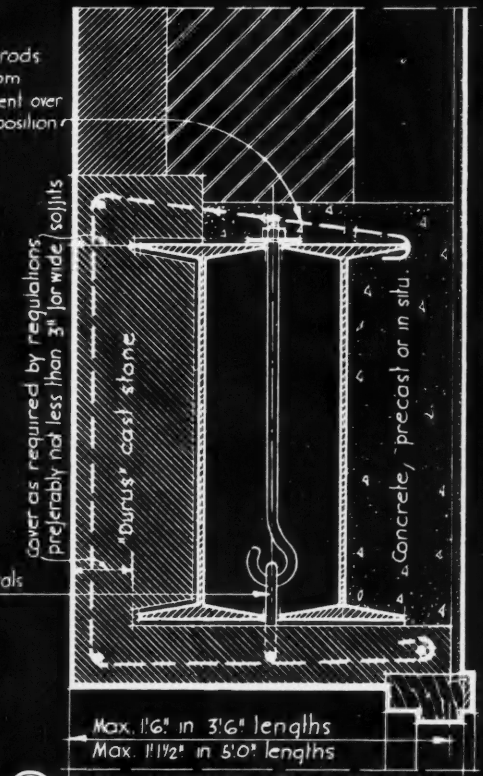

"Durus" cast stone casing.


Cover as required by regulations.

① CAST STONE CASING TO COLUMNS


Plan of alternate stone

CAST STONE CASING can be made for all sizes of steel, & for ½ or ¾ columns


Reinforcing rods projecting from cast stone bent over steel when in position
Cover as required by regulations preferably not less than 3" for wide soffits
"Durus" cast stone
Concrete, precast or in situ
Continuous reinforcing rod looped up at intervals to take hooks
Max. 1'6" in 3'6" lengths
Max. 1'1½" in 5'0" lengths

② DETAIL SHOWING FIXING OF CAST STONE CASING WITH WIDE SOFFIT

Information from D. G. Somerville & Co Ltd.

INFORMATION SHEET: GENERAL DETAILS & FIXING DETAILS OF "DURUS" CAST STONE.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.I.

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CAST STONE

Name of Product : Durus Stone

Description :

Durus Stone is not an Artificial Stone, which is a misnomer commonly applied to cast stone. It is a stone manufactured from the same materials as actual building stone such as Portland, Bath, Ketton, Box Ground, Ham Hill, Hopton Wood, etc., with a backing either of the same stone or of concrete.

The facing is manufactured of finely ground natural stone, ground by crushing plants from blocks of actual stone, gauged with cement and special sand and thoroughly mixed in a pan rolling mill. The exact proportion or mix of natural stone, cement and sand has been arrived at only after many years of experiment; the process being highly specialized and designed to eliminate as far as possible crazing, cracking, or discolouration.

The backing, when of concrete, is manufactured with a mix of clean, washed, crushed stone, sand, and cement, again specially gauged, and all prepared with mechanical mixers. These materials are placed into moulds prepared to suit the architectural requirements of the building. Each casting is carefully reinforced to withstand all stresses, including temperature stresses, and has a hook cast in for the purpose of hoisting and setting. The stones when cast are taken from the moulds and stacked under cover, the Casting Shops being artificially heated so as to maintain an even temperature. After maturing under cover, the castings are then stacked outside and are left until thoroughly matured, and ready for dispatch. From the time that they are taken from the moulds, all stones are kept moist and carefully watched, for this is one of the chief ways to eliminate crazing. The colour of natural building stones can be matched or other colours can be obtained for particular schemes. The finishes applicable to natural stone, such as fine axed, claw tooled, boasted, rock faced, bush hammered, etc., are applicable to Durus. It can also be carved either in the shops or on the site in the same way as natural stone.

Name of Manufacturers :	D. G. Somerville & Co., Ltd.
Address	Durus Stone Works, Cold Blow Lane, New Cross
Telephone	New Cross 4383

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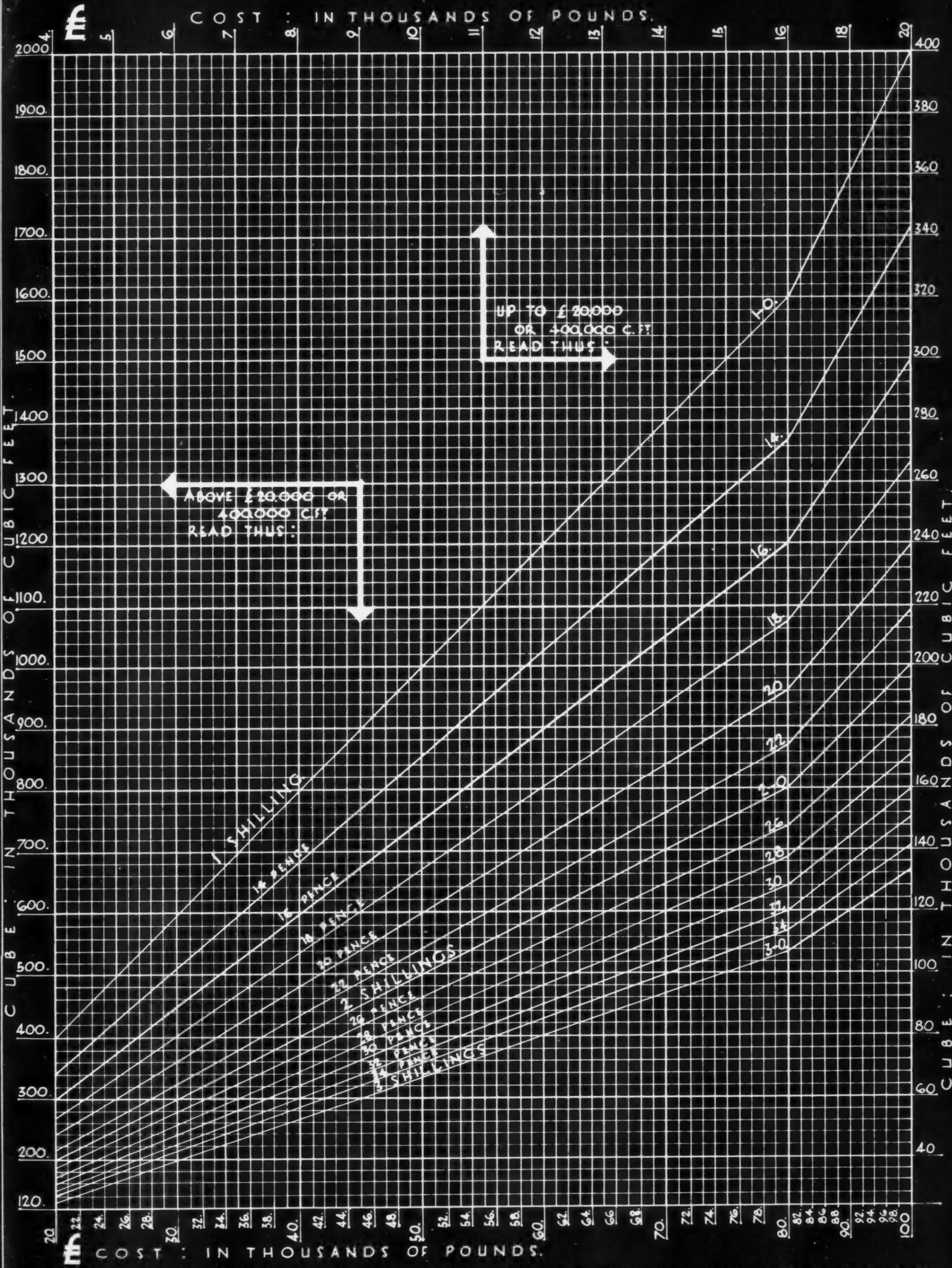

INFORMATION SHEET : CUBE COST GRAPH AT VARIOUS RATES PER C.FT.

SIR JOHN BURNET, TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1.

INFORMATION SHEET • 66 • CUBING OF BUILDINGS

Supplement to THE ARCHITECTS' JOURNAL for December 28, 1933

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INFORMATION SHEET

• 66 •

CUBING OF BUILDINGS

Description :

With this graph, given the total cube of a building, it is possible to read off directly the approximate cost at various rates per cubic foot ; or *vice versa*, if the total permissible cost is known, the maximum cube can readily be obtained for the various rates given.

If rates intermediately between those given (say 19 pence) are required, an approximation may be made between the next higher and lower diagonal lines.